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SPECIAL MEETING.

OCTOBER 26TH, 1898.

F. W. RUDLER, Esq., F.G.S., *President, in the Chair.*

The Minutes of the last Meeting were read and signed.

As this was the first meeting of the session the PRESIDENT called attention to the losses which the Institute had suffered from death during the recess, referring especially to the Right Hon. Sir George Grey and to Sir Henry Peek, Bart. Reference was also made to the Bristol Meeting of the British Association held in September, when the Anthropological section had a successful session under the presidency of Mr. Brabrook, C.B.

The PRESIDENT explained that the present session of the Institute opened rather earlier than usual, in order to secure a communication from Professor Flinders Petrie, who was shortly returning to Egypt.

Professor PETRIE then read his paper on "Our present knowledge of the Early Egyptians," which was fully illustrated by a fine selection of lantern slides.

After the reading of the paper some discussion was carried on by Dr. GARSON, Mr. A. LEWIS, and others, and a cordial vote of thanks was passed to Professor Petrie.

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## ON OUR PRESENT KNOWLEDGE OF THE EARLY EGYPTIANS.

BY PROFESSOR W. FLINDERS PETRIE, D.C.L., LL.D., F.S.A.

IN this communication the author gave a summary of the principal discoveries during the last five years, which had revealed the rise of Egyptian civilisation. It had been said that the beginning of the fourth Egyptian dynasty—the age of the Pyramids, about 4000 B.C.—was the furthest date to which we could go. The puzzle was that there had been no trace of the origin of this high civilisation. But now entirely new discoveries during the last five years at Koptos, Nagada, Abydos, and Hieraconpolis, had discovered remains belonging to the ages before 4000 B.C., which had hitherto been the starting point of known history.

Beginning with the Libyan stock, with some Negro admixture, which occupied Egypt during its earliest phase of civilisation, Professor Petrie exhibited illustrations of some of the objects he had found at Nagada—including statuettes, games, slate palettes for grinding paint, beautifully ribbed flint knives of extreme delicacy, forked lances and arrows, carved spoons of ivory and bone, harpoons, bracelets, and combs. These were at first temporarily assigned to a new race, as we knew nothing more about them; but further research had shown that they could now be safely assigned to the pre-dynastic stock about 5000 B.C., and even earlier. In the graves of this aboriginal race there were found certain bowls of black clay with patterns imprinted upon them. These were of much importance in discussing the relation of this civilisation to that of others in the Mediterranean area. In each of the countries where this had been found—in Spain, Bosnia, Egypt, and Hissarlik—it was contemporary with the introduction of metals. Metals had just been introduced, and therefore in all cases this pottery was associated with the same state of civilisation. The proximate date of this was the close of the Neolithic period and the introduction of metals—viz., 5000 B.C.—and that accorded very well with the time necessary for arriving at the high culture attained by 1500 B.C. These discoveries were consequently of much value in revealing the relative state of Egyptian civilisation to that of the rest of the world at the introduction of dynastic rule. There was a wide difference between the people of 5000 B.C. and those of 4000 B.C., but no difference between those of the latter period and Egyptians of Roman age. This showed that a different race entered the country between 4000 and 5000 B.C.

Then followed the dynastic remains of the presumed tomb of King Mena, the founder of the dynastic history, of about the date of 4700 B.C., and then the remains

of other royal tombs found at Abydos belonging to the first three dynasties. The skill of flint working had undoubtedly gone down and was fast dying out. There was a gradual decay of flint working between 4500 B.C. and 1500 B.C., as metals came into use and copper was gradually hardened into bronze. Professor Petrie showed diagrams of cylindrical seals as used by the kings of the first three dynasties, and impressions of such cylinders, which were vastly more frequently found than the seals themselves. He then exhibited representations of tablets and slates, bearing figures of animals and birds, such as the hawk, bull, lion, and leopard, which manifested a well-acquired knowledge of these animals, as well as of the ibex, gazelle, and antelope. Large numbers of animals, such as the calf, monkey, and dog, had been found modelled in green clay, together with a model of a lion in red pottery. These finds were very important, as they showed the skill of clay modelling of the earliest dynasty, the rise of the art of modelling, and the Egyptian ideas and appreciation of the forms of animals and of the human body. These important monuments of the civil life of the early kings proved that glazing was a speciality of the original people, and that Egyptian art reached its high-water mark somewhere about B.C. 4000. Slate tablets and mace-heads showed the kings in triumph over their enemies, receiving captive kings, opening the public works, or reclaiming the marshes. Other vessels had dedications written upon them. The handled copper vessels showed the most advanced metal work found of the first three dynasties.

The population of the pre-dynastic age differed in type from that of historical times, and in the early monuments the presence of diverse types was very clear, some being shaven, some bearded, some long-haired. We had at last before us evidence of the close of the period previously considered pre-historic, showing the development of the art, writing, and civilisation of Egypt and the composition of a race which had since maintained its character during 6,000 years. The puzzle was how this civilisation arose, and we had discovered evidence to solve this puzzle. Egypt was then an originator in the arts and not a borrower, but ever since then most of the nations of the earth had been borrowers and not originators. Here we were studying the history of a country, not borrowing but developing a vast and complex civilisation from its own resources.

## ORDINARY MEETING.

NOVEMBER 8TH, 1898.

F. W. RUDLER, Esq., F.G.S., *President*, in the Chair.

The Minutes of the last Meeting were read and signed.

The PRESIDENT, in introducing the paper of the evening, regretted the absence of the author, who had just left on his return to New Guinea.

The SECRETARY—Mr. T. V. Holmes—then read Mr. R. E. Guise's paper on "The Tribes inhabiting the mouth of the Wanigela River, New Guinea."

The reading was followed by the exhibition of a number of lantern slides belonging to Mr. Guise, and also of a series of slides lent by Mr. N. Hardy, and representing the various tribes, scenery, etc., of New Guinea.

The Rev. R. WARDLAW THOMPSON, Foreign Secretary to the London Missionary Society, joined in the discussion that followed. He pointed out that he believed the river which is here called the "Wanigela," and which is known on the map as the Kemp-Welch River, is not known as the Wanigela by the natives, the Wanigela being the river that flows into the head of the Marshall Lagoon, some miles to the east of Kalo.

Mr. JOHN JENNINGS and Mr. G. L. GOMME also joined in the discussion, which was brought to a close by the PRESIDENT, who proposed a vote of thanks to Mr. Guise, the author of the paper; to Mr. Holmes for reading it; and to Dr. Garson for exhibiting the slides. This vote of thanks was carried unanimously.

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## ON THE TRIBES INHABITING THE MOUTH OF THE WANIGELA RIVER, NEW GUINEA.

By R. E. GUISE, Esq.

BEFORE reading my paper, I think that it is due to my audience that I should state my qualification to speak with authority on these tribes, whose customs I propose to make the subject of my paper. With the exception of a year, I have lived amongst them since 1883.

At that time there was no Government, and I saw the native living his free and unfettered life—ever fighting, and ever watchful and suspicious of treachery. His life has now, of course, much changed, through the enforcement of law by the Government; but the old leaven still remains, and though the native carries no spear, except a fish spear, and his shield is fast decaying on the shelf above his fire-place, he still preserves his restless watchful eye, and his character is unchanged.

This, however, before the advance of the European acquirer of land, will not last long; and I hope that the facts here given will be useful in recording the characteristics of one of the few remaining primitive races when unaffected by civilisation and its doubtful benefits.

The tribes of Bulaa, Babaka, Kamali, and Kalo inhabit the whole of Hood Point in the Central District of British New Guinea, Kalo being situated at the mouth of the Wanigela River—Babaka and Kamali two miles inland from the extremity of the point; and Bulaa (a marine village) the extreme point. They all speak a dialect of the one language, though Kalo, Babaka, and Kamali show many signs in their language of intercourse with inland tribes. Kalo numbers about 1,500, Babaka 500, Kamali 400, and Bulaa 750.

In physique the Bulaa people are of a much more robust type than the inland tribes. This, however, may be the effect of their almost exclusive fish diet. They emigrated some 30 years ago from a tribe living at the mouth of Hood Lagoon, where they were held in irksome subjection by a tribe called Keapara. They had no lands; nor were they allowed by the Keaparans to acquire any. Necessity thus forced them to the sea for a living, and they are at this moment far superior to all other tribes in New Guinea in the art of netting fish.

Their own account of their origin is as follows:—

Many ages ago the surface of the earth was uninhabited, but in its centre lived a dog and a python. One day the dog met the python, and remarking that they were both living very lonely lives, suggested that they should improve matters by marrying. The python was quite agreeable, and they married. In

course of time the python produced two male children and one female child. On these children arriving at the age of puberty, the two men married the one woman. To one she bore two girls and to the other two boys. They grew up and married, and had a numerous progeny.

One day the dog organised a large hunting party, and during the hunt an iguana was put up, who, on being disturbed, took refuge in a very lofty areca nut tree. The dog ordered one of his sons to dislodge the animal by climbing after it. He followed it up till he found that it had escaped on to the crust of the earth by a cave through which the areca nut tree passed. He followed it, and was so struck by the beauty of the scenery around him, bathed as it was in bright sunshine, that he forgot about the iguana, and returning at once to his relations, described to them what he had seen, and urged them to leave the gloom and darkness in which they lived, and follow him to form villages above. After much discussion six couples agreed to accompany him. The dog was much enraged at their decision and intimated his intention of cutting down the tree should they carry out their intention. The following day they started, and having reached the crust of the earth, the dog cut down the palm and barred their return. On their arrival at the top, each couple took different directions and formed the villages of Kamali, Babaka, Kalo, Keapara, Palawai Bulaa, and Waikunina. The dog's son resided at Keapara. Some time afterwards, feeling the approach of death, he called together all his relations and gave them strict injunctions that on the death of anyone who had come from the bowels of the earth, his remains and all utensils belonging to him should be placed at the mouth of the cave at Alivele. In obedience to his commands this was done, and their skulls and bones may be seen there at the present day.

The mountain of Alivele lies near Hood Hill.

I will commence my account of the natives at the birth of the child, and will follow his career till death.

At the birth of a child, the nearest female relative of the mother acts as midwife; the inlying woman is seated in a squatting position, holding to a rope suspended from the ceiling. The principal attendant is seated immediately behind her and clasps her tightly round the waist, and in this position the child is born. Should the labour be protracted, the husband is called. He seats himself beneath the house (built on poles) and undoes his perineal band (*ivi*). This is supposed to be an infallible remedy. A woman expert is sometimes summoned in cases of difficult parturition, who makes passes over the sufferer, muttering a jargon meanwhile. Should the child when born show signs of lethargy, the sinkers on a fishing net are shaken over its head.

Immediately the child is born the navel string is severed, and it is washed and returned to its mother. The child is allowed to take nourishment from its mother as long as it will. I have known children of three and four years of age still being suckled.

No cohabitation can take place between man and wife until the child can walk.

The naming of a child is the first act of importance in its existence. It is generally named after some relation. It very often happens, however, that before its birth, a friend of the mother will ask and obtain the privilege of naming it. It will then be named in such a way as to commemorate some notable deed or act of its godfather, such as Laka-Kwaipo=I went to Kwaipo (a much dreaded village); Nabu Laani=I swam for ever; Vagi-Kama=I killed Kama. Its name is sometimes decided by any particular characteristic the child may have, as—Kopina-Kulo, a white skin; Gima-Rakava, a beautiful hand; Vavine Kamu, a big woman.

When the next child is born, some female relative takes charge of the first-born, and acts towards it in every way as its mother.

The ears of all children are pierced in several places around the edge at a very early age.

The next act of importance is the tattooing of the child. A boy is never tattooed until he has taken a life or assisted to do so (I shall treat of this in description of Warfare). A girl is tattooed on the face at an early age. When about eight years old the remaining portions dedicated to this, are treated, with the exception of the particular tattoo placed on the chest, which has its apex between the breasts, and the tattooing on the front and lower part of the body. The former is done when the girl's breasts are commencing to form, and the latter when she enters the list of marriageable women. A woman without the latter tattooing has no attraction whatever in the eyes of the young men.

I shall give a description of the ceremony attendant on the entry of girls into marriage under the heading of Feasts.

The initiation of boys to manhood takes place when they are ten or twelve years old. Up to that age they wear no covering of any sort. On a day appointed by the father, the boy is washed, besmeared with cocoanut oil and a bran new *ivi*, or perineal band, placed on him. All the family jewellery is requisitioned to adorn him, and his chest is literally covered by boars' tusks, shell armlets, etc. He is allowed to eat no boiled food for ten days; but may stave off starvation by roasting a single banana now and then. He may only eat the centre, throwing away the extremities. It is most amusing to observe the sense of importance that the donning of this *toga virilis* confers on the boy. The day before you will see him playing about under the houses with his friends, throwing miniature spears at cocoanut fronds, and otherwise exercising himself in boyish games, and regarding all girls with contempt. Once the *ivi* is fastened on, however, his whole demeanour changes. He stalks round with such an important and haughty air, looking neither to the right nor left, that it is most ludicrous. He joins in no more boyish games; but may be seen gravely talking with the elders of the tribe on the prospects of the crops, the expected advent of dugong and other deep-water fish; or the chances of war with neighbouring villages.

*Courtship.*—An unmarried woman can be easily distinguished from a married woman by her hair being long, by wearing ornaments, and by the make and shape of her *rami* or petticoat, the only covering she wears.

A girl may wear as many under-petticoats as she pleases. These are called *nikeve*, and are made by splitting the leaf of a broad-leaved plant into thin strips. They are beautifully soft and supple, and I have many times when camped on the hard floor of inland houses, used two or three as a mattress. Over these is woven the ordinary *rami*, an uncoloured petticoat made of grass, but covered at intervals of an inch by white broad ribbons of the broad-leaved plant.

The dress for feasts and ceremonies is a much more elaborated affair, and is composed entirely of broad leaves of the same plant, with alternate ones dyed a deep red. It reaches from the waist just above the knee. The right side of the petticoat is left open with a view of exposing the tattooing of the right buttock and thigh. The breadth of the open space is only regulated by the work of the owner. Quiet modest girls are content with one of 3 or 4 inches, while girls of flighty disposition affect an exhibition only just stopping short of positive indecency.

Their ornaments are the *alo* or pearl-shell worn round the neck, and fashioned in the shape of a crescent; arm-shells (*raula*), made from the base of a conical sea-shell.

At time of the *Kapa* or annual feast, the hair on the upper forehead is shaved, and sea-shells of a bright red colour are attached to the uncut locks immediately above the shaven portion.

The dress of the young man consists of his perineal band only. His ornaments are boars' tusks and pearl shells, with head-dress of parrots' and cockatoos' plumes. (This, however, I shall describe later on.)

A boy and a girl are often betrothed at a very early age, by their parents, and the father of the boy works for the father of the girl with a view to the payment of the marriage dowry. He always presents him with a share of any fish or game he may take, gives him assistance in building his house, turning up the ground for his plantation, and in many other ways. When the couple arrive at marriageable age, the girl is handed over to the boy and the remaining payment made.

It is very rarely, however, that early betrothed marriage comes to anything. It usually happens that the girl finds she likes some other boy better than the husband chosen for her—or *vice versa*.

She has her remedy. The day before the marriage ceremony she disappears into the bush with the man of her choice, where she remains with him all night. They return to the village in the morning, and according to their laws are man and wife. The disappointed suitor arms himself and his relations, performs a war dance in front of his successful rival's house, and loads him with all the curses he can remember or invent. As, however, this proceeding is mainly in the form of a ceremony to appease his wounded honour, not much notice is taken of it, and he betakes him to his house again. Sometimes, however, it does not end so peacefully. I have seen half-a-dozen men wounded in an affair of this sort.

The method of courtship is somewhat singular, the girl invariably taking the initiative. When a boy admires a girl, he will not look at her, speak to her, or go near her. He, however, shows his love by athletic bounds, posing, and pursuit, and by the spearing of imaginary enemies, etc., before her, to attract her attention. If the girl reciprocates his love, she will employ a small girl to give to him an *ugauga gauna*, or love invitation, consisting of an areca nut, whose skin has been marked with different designs, significant of her wish to *ugauga*. After dark he is apprised of the place where the girl awaits him; repairing thither, he seats himself beside her and as close as possible, and they mutually share in the consumption of the betel nut. This lasts about half-an-hour. Should the girl favour his suit, she will signify to him that the door of her house will not be closed against him should he wish to visit her.

It is understood by the parents of the boy and girl that the consumption of betel nut by the couple is tantamount to their betrothal, and they do not interfere with the visits of the boy to the girl's house, where he usually sleeps. The mother of the girl, when she thinks that the state of affairs has continued long enough, arises in the middle of the night, prepares a dish of food, generally banana and sago pudding. Waking up the betrothed couple she places before them the food. They eat it, and by the laws of the land are then man and wife. The marriage dowry is not handed over at once, but never later than a few months after they have become man and wife. The father of the boy in the meantime visits all his friends and solicits aid from them to pay the dowry (this is called *nogi-nogi*). One will give him a spear, another an arm-shell, etc. The usual price of a bride is six spears, six or eight arm-shells, two boars' tusks, a few shell necklaces, and two or three perineal bands.

The day after the marriage, the girl doffs all her ornaments, such as ear-rings, pearl shell, etc., but is allowed to retain her dancing dress, which marks her as a bride for a week or so. At the expiration of this term, her girl's dress is replaced by a married woman's petticoat, which reaches below the knees, and has no opening on the right side. It is made of grass and has no ornamentation in the shape of coloured or broad stripes. Her head is now closely shaven with a piece of obsidian or glass bottle, and she is ever afterwards compelled to keep it so. On the centre of the naked cranium a small tattoo mark, about an inch long, is placed. She can no longer join in the dances, but belongs to the ranks of the onlookers, and generally arrogates to herself the rôle of adviser to the girls on dancing matters.

If a woman has cause of grievance against her husband, or finds that he is distasteful to her, she leaves him and returns to her mother's house. She is now a *kapani*, or divorced woman, and her husband has no further control over her. It is very easy to distinguish these women by their bold look, unabashed demeanour, also by the profusion of sweet-smelling plants that they wear in their ears and armlets. They are not permitted to join their husbands again, but in everything else are allowed as much liberty as a single girl.

A man has an equal privilege with a woman as regards divorce. If he disapproves of any of her actions he will probably hit her over the head with a paddle and tell her to make herself scarce.

A divorced woman invariably marries again in a few months. On the news of her approaching marriage, the former husband arms himself and parades in front of his rival's house, challenging him to mortal combat. This is, however, make-believe, as he has really no wish to fight, but desires to impress his rival with the desirability of paying a good price for his wife.

*Death.*—On the approach of death the house of the sick man is filled by anxious relatives and friends, who sit around and watch the end. His death is a signal for a tremendous burst of grief from all present, the men beating their faces with the closed hand, and the women tearing the sides of their faces with their finger nails until the blood pours down. The friends of the deceased bring presents of food, which they place before the corpse. This is not meant as food for the dead man's spirit, but as an act to appease the wrath of his relatives. As decomposition sets in very quickly in the hot humid atmosphere of the plains, a suitable spot is selected and the grave dug about 5 feet in depth. In the inland villages, immediately in the vicinity of the house is a favourite position, or beneath the family *dubu*, a platform in a public spot in the midst of the family land. The coast tribes, whose houses are built on piles in the water, sometimes bury in the bush or place the corpse in a canoe and anchor it off the village while the husband or wife, as the case may be, remains in close attendance. There are certain ceremonies connected with this that are too repulsive for publication. When the corpse has become dry, it is placed on a platform in a tree, and after a lapse of time the bones are collected, cleaned, and tied in a bundle. This is placed in the roof of the house.

I will now return to a description of a burial by inland people.

The corpse is placed in the grave, which is lined with mats, and a temporary shed reared over all. Beneath this the widow (or widower), sits and watches the corpse. Food is supplied to her by relatives. This seclusion lasts two or three months, and the widow employs herself during this time in fashioning widow's weeds, which consist of a long grass petticoat reaching to the ankles. At sun-down, on the day of the burial, an interesting ceremony takes place. Some old woman, or man, who has the power of sight-seeing, is summoned. She seats herself at the foot of the grave and peers into the darkening shadows beneath the cocoa-nut palms. She remains perfectly still in this position, all the relatives of the deceased regarding her with the deepest anxiety. Presently her looks become more intense, and lowering her head, but still gazing into the depths of the forest, she says in low and solemn tones, "I see coming hither the spirit of Kalo Kava's (dead man's name) *tupuku* (grandfather). He says he is glad to welcome his grandson to his abode. I see now his father and his own little son also, who died in infancy."

She gradually becomes more excited, swaying her body from side to side, and

waving her arms. "Now they come," she says, "I can see all our forefathers in a fast-gathering crowd; they are coming closer and yet closer. Make room, make room for the spirits of our departed ancestors."

By this time she has worked herself into a frenzy; she throws herself on the ground, beating her head with her closed fist. The foam flies from her lips, her eyes become fixed, and she rolls over insensible. She is soon resuscitated, however.

A widower's costume consists of an elaborate head-dress, made of shells. He has armlets of the same make, and a very graceful loin fringe, which depends from the waist to half way to the knee. His hair is cut off and he blackens his whole skin. His dead wife's petticoat is fashioned by sewing it into a square shape, about 8 inches in depth. On it are tied any ornaments she may have possessed, and a string attached to it, which is worn round the man's neck. The petticoat depends beneath his right arm.

A widow shaves her head the same as a widower. She also wears a similar head-dress, but on a much larger scale. Her petticoat, as I have before mentioned, is made of grass and reaches to her feet. She generally wears a second one over her shoulders. She wears her husband's perineal band round her neck, with his lower jaw-bone attached. Her body is blackened.

Some of the inland tribes have a peculiar way of disposing of a corpse. A double platform 10 feet high is erected in the vicinity of the village. On the upper platform the body of the dead person is placed; on the lower one, immediately beneath the corpse, the husband (or wife) sleeps, allowing the decomposing juices of the dead relative to fall on him. The mourner has to walk solemnly through the village each day, and shows his affection for his wife by never washing himself.

One peculiar ceremony in connection with the death of inland people is the stripping-off of the epidermis with a view to the discovery of the person who has caused the death. Certain portions of the body are allotted to certain relatives. When decomposition has sufficiently advanced, his epidermis is stripped off by some friend of the deceased. Should it fail to come off on some part of the body, the relative to whom that part is allotted has been the cause of the death. The portions are thus allotted:—To the mother, the inside of the thighs, because she has carried him as a child, straddle legs; the nose, because she has cleared it when the child has a cold, by sucking it. To the father, the forehead, because on that part he wears his head-dress of plumes; the chest, because on that part he wears his ornaments of pearl shell and boars' tusks. To the grandmother, the buttock and back, as she has nursed the child. To his eldest brother, the feet and legs. To his aunt, the belly and navel, as she assisted at his birth.

I shall treat further of this under Religion.

The name of a dead person is never tabooed as is the custom of many savage tribes; indeed, every opportunity is seized to repeat the name. Thus, for instance,

a dead man's relations all adopt his name, prefixed by a title denoting the relationship.

For instance :—

Corpse's name	...	...	...	...	<i>Aluveliki.</i>
„ father	...	...	...	...	<i>Maru-aluveliki.</i>
„ mother	...	...	...	...	<i>Ari-aluveliki.</i>
„ brother	...	...	...	...	<i>Koa-aluveliki.</i>
„ sister	...	...	...	...	<i>Rapu-aluveliki.</i>
„ wife	...	...	...	...	<i>Wapu-aluveliki.</i>
„ husband	...	...	...	...	<i>Roai-aluveliki.</i>
„ son	...	...	...	...	<i>Muni-aluveliki.</i>
„ daughter	...	...	...	...	<i>Muni-aluveliki.</i>

*Laws of Inheritance.*—No woman can own any land. I may preface my remarks on this paragraph by stating that there is no part or portion of the lands of a tribe without an owner. Each family land is clearly known and defined by permanent landmarks, such as trees, swamps, small hills, etc. The male head of the family is the sole owner of the whole land belonging to his family, and he partitions the land to the different members of it, at the commencement of each annual planting season. Should he die, his eldest son, if of mature age, fills his place. Should he be considered too young and inexperienced, his place is assumed by an uncle until such time as he shall be old enough to act for himself.

This law also holds good in the succession to chieftainship, an uncle acting for the child chief, though he is obliged to give all orders in his name. At the division of produce at a feast, the uncle calls out the name of each recipient of a present, and the young chief hands it to him.

*Warfare.*—War may be caused in many ways ; but the most common cause is an act of vendetta. I will enumerate an instance or two of another common cause of war. A man returning from hunting or fishing is disappointed at his empty game-bag, or canoe, and turns over in his mind how to discover who would be likely to have bewitched his nets. He perhaps raises his eyes and sees a member of a neighbouring friendly village on his way to pay a visit. It at once occurs to him that this man is the sorcerer, and watching his opportunity, he suddenly attacks him and kills him. This man's life has the value of another man's life, and unless full compensation in the shape of boars' tusks, shell armlets, etc., is given, his friends take the first opportunity of squaring the account by killing a man, or as many more as they can. Thus a vendetta is established that lasts years and years, until one day it strikes some chief that it is time this state of affairs is ended, and he sends a message to his enemies by a friendly native, suggesting a squaring up. A place is appointed ; the number of lives taken on each side is estimated, and the value of the balance of lives taken by the stronger tribe paid for.

Women are a very fruitful cause of war. They visit inland tribes for the purpose of bartering fish for vegetables, and are very keen dealers. Disputes are

always arising, and one of the disputants, enraged beyond control, runs off and tells her husband and brothers that she has been insulted and robbed. She is not particular about colouring her story, and the men seizing their spears, rush to the spot and kill as many women as they can.

It sometimes happens that one tribe will challenge another, and a place of meeting is arranged. The hostile tribes arrange themselves in two lines facing one another, with an interval of about 100 yards between them. A man slips out from one line and abuses the other side. He is soon confronted by an opponent equally versed in the science of vituperation, and the amount of bad language used would satisfy an Australian bullock-driver. They gradually become more excited, until finally they dash at one another and a spear or two is thrown; other warriors now rush out from either side and the battle commences. It is, however, of but short duration, as a man or two wounded on one side is considered sufficient excuse for that side to run away. The spears in use are 10 feet long, and so heavy that it is impossible to use them with effect over 20 yards. They use shields which cover all the body. Stone clubs are used; but only in pursuit of a flying foe, or to despatch a wounded man. Should a woman throw her petticoat over a wounded man, he is safe from further molestation.

No quarter is ever given.

Certain distinctions in the wearing of ornaments are allowed to warriors who have taken life. They are these:—

The *Igo*.—The centre small rib of the cocoanut frond, to which small white feathers are attached at intervals.

„ *Wagula*.—A strip of cuscus skin worn across the forehead.

„ *Kalai*.—White cockatoo's plumes worn in the hair.

„ *Tepe*.—A very pretty ornament of small white shells, worn as a forehead band.

„ *Luibobo*.—A pendant of small beads worn in the ears.

„ *Babaka*.—Scarlet croton leaf.

„ *Kaima*.—The base of a small conical white shell, worn as a pendant from the nose.

„ *Rogena* or *Muravaputi*.—Certain tattooing on the back of legs and chest.

It is also worn on the chin by boys whose fathers have taken life.

„ *Muni*.—A cane belt dyed black.

„ *Pina*.—The upper mandible of the horn-bill which is worn on the forehead. This is a special distinction and equal in value to our V.C. Only men who have slain an enemy in single combat can wear it.

„ *Kapa*.—A long ribbon of soft white bark dependent from the back of the head.

„ *Tiake*.—The plumes of the Raggiana worn as a head-dress.

*Custom of Purification after taking life*.—A man who has taken life is considered to be impure until he has undergone certain ceremonies: as soon as possible after the deed he cleanses himself and his weapon. This satisfactorily

accomplished, he repairs to his village and seats himself on the logs of sacrificial staging. No one approaches him or takes any notice whatever of him. A house is prepared for him which is put in charge of two or three small boys as servants. He may eat only toasted bananas, and only the centre portion of them—the ends being thrown away.

On the third day of his seclusion a small feast is prepared by his friends, who also fashion some new perineal bands for him. This is called *ivi poro*. The next day the man dons all his best ornaments and badges for taking life, and sallies forth fully armed and parades the village. The next day a hunt is organised, and a kangaroo selected from the game captured. It is cut open and the spleen and liver rubbed over the back of the man. He then walks solemnly down to the nearest water, and standing straddle legs in it washes himself.

All young untried warriors swim between his legs. This is supposed to impart his courage and strength to them. The following day, at early dawn, he dashes out of his house, fully armed, and calls aloud the name of his victim. Having satisfied himself that he has thoroughly scared the ghost of the dead man, he returns to his house.

The beating of flooring boards and the lighting of fires is also a certain method of scaring the ghost. A day later his purification is finished. He can then enter his wife's house.

*Feasts.*—The most important feast is the annual *kapa*. It is during the celebration of this that marriages usually take place. Certain produce is cultivated for three months previous. This ensures a bountiful supply of bananas, yams, etc., for display at the feast, and for distribution to visitors afterwards. Each visitor is allowed to bring as many baskets as he pleases, and it is considered to be a great disgrace if the givers of the feast have not sufficient food to fill them.

Three months previous to the *kapa*, a small feast is given called *Wagi keb*, at which no ornaments are worn; nor is singing during dancing allowed, though drums are beaten. It is at the expiration of this feast that the taboo on produce is imposed.

It would be perhaps as well here to describe the dress of the dancers. No one is debarred from participating in the dance; but though married women and widows and divorced women are not forbidden, they would have to endure much ridicule should they do so.

The head-dress of an unmarried woman is a most elaborate affair, and all the family jewels are borrowed to make it as showy and costly as possible. The upper part of the forehead is shaved to the depth of 2 or 3 inches. To the hair immediately above it are attached round flat red shells by a hole bored through the centre. The shells are very valuable. They are mixed at intervals with small conical white shells.

At the time of dancing, a head-dress, which entirely surrounds the head, is worn above the shells. It is made of the feathers of a red parrot. These feathers are much esteemed if they are yellow. As they have no means of dyeing, they

keep the parrot in captivity for three or four years, meanwhile feeding him on a yellow root. This in time changes the red feathers of the tail to yellow.

Round the neck of the girl and resting on her breast are placed boar's tusks, shell armlets and shell necklaces. Her dancing petticoat (*kuli*) is an elaborate affair of broad stripes of scarlet and white soft bark. It is made from the leaf of a small plant similar to a prickly pear.

The dress of the men consists of the yellow perineal band. They wear all their rewards for taking life, as well as pearl shell crescents, boar's tusks, etc. Between the knee and the calf, leglets of white bark are worn.

The head-dresses of paradise plumes are very imposing; these are attached to a thin piece of tortoise-shell which is weighted at the extremity and sways in unison with the motion of the head in the dance.

For a month or so previous to the *kapa* the natives busy themselves in erecting *tapus*, i.e., scaffolding on which to hang the produce, and in bringing this in and suspending it on the *tapu*. These *tapus* are erected in the centre street of the village, generally immediately opposite the houses of the chief or of influential men. Dancing goes on every night during this work.

The feast lasts two days.

The members of each family which possesses young daughters, freely produce their family jewellery to adorn her, and much emulation is shown in this respect.

It is at this feast that the initiation of girls to womanhood takes place. The family of each girl who takes part in the ceremony has to supply a pig for the public.

On the first day of the feast the custom of *iropi* takes place. The girls are all freshly tattooed on the back and buttocks. A particular petticoat, which exposes the whole of the buttocks and back of the legs, is worn for the occasion. To the centre of the string which supports the petticoat, and immediately at the centre of the small of the back is attached a string about 3 feet long, with an old knitted bag on the end as a weight. The girls form up in a row, one immediately behind another. Each girl holds the string in her right hand, about 6 inches from the bag. To the slow beat of the drum, she takes one step forward with her right foot, at the same time swinging the bag behind her and over her left shoulder, where she adroitly catches it with her left hand and to another beat of the drum swings it over her right shoulder, recovering it in the right hand, and taking another step forward. This ceremony lasts about ten minutes.

The following day the principal part of the ceremony, called *kuiriga*, takes place, and many hours are spent on the toilet of the girls. They are freshly tattooed on the whole of the front of the body, especial attention being paid to the lower parts, as a girl who is untattooed there, or has but indifferent tattooing, possesses no attraction in the eyes of the young men. They mount the *dubu* (permanent staging for ceremonies) and stand side by side; and on a given signal untie their petticoats and throw them behind them. Married women then

advance and place in front of each girl a basket containing on top a few long yams, and a small knife, and beneath, a quantity of areca nut. The girls quite enjoy their position, and do not show any shame. I have forgotten to mention that on this occasion, only a girl, providing her father has taken life, may wear his paradise plumes, weighted in the manner I have previously described. An old woman now advances and anoints each girl on the breast and the whole of the front of the body with melted pig's fat or cocoanut oil. They are now ready for the concluding ceremony. Two or three married women, or widows, seat themselves behind the girls and beat drums with slow and rhythmical measure. Each takes a yam in her left hand and the knife in her right, and at each beat of the drum cuts off a piece of the yam, bends her knees, and slightly bows her head, causing the weighted head-dress to sway forwards. The whole effect is wonderfully pretty. After each girl has cut up half a dozen yams, she, on the cessation of the beat of the drums, which is announced by two sharp taps, seizes the basket of areca nuts and pelts the crowd. This part of the affair is much appreciated by the onlookers, who scramble or tumble over one another like children.

Very few, if any, men seem to care to look on at the "ceremony," old women, widows, and married women who have daughters, constituting the majority of the bystanders; and it is amusing to hear them passing experienced remarks on the tattooing, and referring to the days when they joined in the *kuiriga*. The Government have suppressed this part, insomuch that no girl is allowed to doff her petticoat.

*Religion.*—There is no belief in a good spirit, though they have any quantity of evil ones. All their dead ancestors are always on the watch to deal out sickness, or death, to anyone who may displease them, and the natives are most particular to do nothing that should raise their ire.

At death, they join their forefathers underground, where they have splendid gardens, houses, etc. They believe that a famine underground always precedes one above.

*Sorcery.*—There are two species of evil working magicians or sorcerers—the *palagu*, or spirit of a dead relation, and the *wara*, a living man or woman who has the power of causing death by incantations, or by means which I shall now describe.

I must preface my remarks here by stating that in their belief no one dies a natural death. Some *palagu* or *wara* has accomplished it. The living *wara's* usual procedure is (supposed to be) this. He wanders at night through the garden and plantations of a neighbouring village until he finds some villager asleep in his garden house, or in the bush. He draws his bamboo knife, cuts off his head, and disembowels him. He then replaces the head in its natural position on the shoulders, and rearranges the other wound. Having anointed the edges of the wounds with a particular ointment (the composition of which is unknown) which has the effect of completely obliterating all trace of mutilation, he leaves the man sleeping. Before departing he rubs a small portion of another ointment on the

instead of his victim, which has the peculiar property of attracting venomous snakes, causing them to bite the part anointed. The man wakes in the morning and goes about his daily duties, feeling no hurt.

It happens that one day, sooner or later, he is bitten by a snake and dies. After the death the relatives assemble and examine the body for marks of the *ward's* work.

In death from snake bite there is much *post mortem* discoloration, and one man pointing to a mark on his neck will say, "Look! here is where his head was cut off"; or, "Here is where he was speared"; or, "Here is where he was disembowelled."

*Hunting and Fishing.*—The game of New Guinea consists of pigs, kangaroo, wallaby, kangaroo rats, snakes, etc.

Hunting is, of course, not confined to the inland tribes.

About September, when the country is getting thoroughly dried up, a day is appointed for the annual burning of the grass, *lege kapua*.

Any neighbouring villages supply contingents to swell the ranks of the hunters. A spacious expanse of grass, with heavy scrub in its vicinity, is chosen as the scene of operations.

Nets 3 feet high, supported on light wands, are arranged along the edge of the scrub, some of the men concealing themselves at intervals behind the nets. The grass is lighted simultaneously at different points, until a long line of flame is formed, which gradually approaches the line of nets, driving the game before it. The nets, on the kangaroos striking them, collapse, entangling them, in which state they are speared. Each man carries a small hand-net attached to an oval framework of cane, with which he captures young kangaroos, paddymelons, and such like small cattle. He is also provided with a similar net, which is made much stronger, the meshes being drawn taut across the framework.

This is to withstand the charge of a pig. The man, as the pig charges, drops on his knee, and holding the net by the framework in both hands, pushes it fair and square over the pig's snout, in which position any man can hold the biggest pig. No man may carry, or partake of, any kangaroo that he has killed. He generally exchanges it with another man similarly situated.

They have many charms to ensure a lucky day. These are attached to their nets. The charm most prized is the *poli*, or stone found in the crop of the *goura*, pigeon. This charm is also much in use as a remedy for sterility in women.

Turmeric and ginger, spread on spots which are frequented by kangaroos in the heat of the day, is supposed to partially paralyse any animal smelling it.

The natives' wives and sweethearts accompany them, carrying food, etc., for the exhausted men.

*Fishing.*—Confined entirely to coast tribes. The village of Bulaa, near which I reside, is the greatest fishing village in New Guinea.

They own but little land and do not understand agriculture.

They are consequently obliged to be fishing night and day to obtain fish to barter with the inland people for vegetables.

They have a variety of nets, from the huge *walu*—a mile long—to the little *ligi*, or shore net, manipulated by two men.

There are a great variety of fish to be found among the coral reefs fringing the shore, and on the main barrier reefs, two or three miles distant from the land.

The preparation for dugong and turtle fishing are most elaborate, and commence two months before the fishing is started. A headman is appointed, who becomes *belaga*—holy. On his strict observance of the laws of the dugong net depends the success of the season. He lives entirely secluded from his family and is only allowed to eat a roasted banana or two after the sun has gone down. Each evening at sundown he goes ashore and bathes on the point of land overlooking the dugong feeding-ground. Having taken off all his ornaments, which, with this exception, he is never allowed to doff, he walks solemnly into the water and dips his head three times, meanwhile throwing into the sea some *mula-mula*, i.e., medicine to charm the dugong. It is composed of scraped cocoanut, some bruised sweet-smelling herbs and scented gums. He then anoints himself from head to foot with cocoanut oil and returns home. While he is undergoing these privations all the able-bodied men of the village are employed in collecting the bark of a certain tree, and beating and washing it until they obtain a very strong fibre, which they twist into rope and fashion into the net. These nets are often a mile long, and five fathoms deep.

It is only at night that they fish for dugong. The first evening they leave a feast is given of which only the fishers partake. The nets are carried on a very large double canoe (*kebo*), which is accompanied by many small canoes. The *belaga* man directs operations, and knows well the deep-water channel by which the dugong escape to the open sea when disturbed. Here he lowers his net, the small canoes seeking the shallower waters in the bottom of the bay, with a view to driving the dugong towards the net. Perfect silence is observed on the small canoes, until the snort of a dugong rising to breathe is heard between them and the deep channel where the net is laid. The occupants of the small canoes then beat the sides of their craft with their paddles, which causes the dugong to dash headlong for the opening. When they strike the net, the men who are stationed at intervals along it undo their *ivi* (perineal string), which, on this occasion, is made from a similar rope as the net, and diving down, make fast one end round the dugong's tail and the other end to the net. In this position it is soon drowned. At early dawn the catch is poled slowly to the village, the women lining the verandahs, swaying their bodies and singing their *lamis*. The nets are first placed on the scaffolding above the sacred platform, and the dugong or turtle are laid beneath. The *belaga* man then distributes them among his friends, first observing the sacred custom of making a small incision in the belly.

*Conclusion.*—In conclusion I would remark that, from what I have said, you all must have judged that the Papuan is a being with the form of a man, but

possessing the mind of a little child. It is so. His bursts of violent passions, caused by the most trivial incident; his continued sulkiness at times, and his rapid recovery from overwhelming grief to extreme hilarity, all point to a childish mind. He is, however, intelligent, and is an apt pupil, and I foretell that the Papuan will be quite capable of competing with (say) the Maori or the African negro. His physique is of the best; his powers of endurance are simply wonderful, and, strange to say, he has a most musical ear. He is kind and most hospitable, and his code of morals—though they might be condemned by civilisation—are not without many traits of honour and justice.

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## ORDINARY MEETING.

NOVEMBER 22ND, 1898.

F. W. RUDLER, Esq., F.G.S., *President, in the Chair.*

The Minutes of the last Meeting were read and signed.

The PRESIDENT, after some introductory remarks, called upon Mr. William Crooke to read his paper on "The Hill Tribes of the Central Indian Hills, their Ethnology, Customs, and Sociology." This was well illustrated with lantern slides.

Discussion was carried on by Mr. KENNEDY, Mr. GOWLAND, Mr. GOMME and Mr. IRVINE, and Mr. CROOKE replied.

A cordial vote of thanks was passed to the author of the paper, and also to Dr. Garson for exhibiting the lantern slides.

## THE HILL TRIBES OF THE CENTRAL INDIAN HILLS.

By WM. CROOKE, Esq., B.A.

I VENTURE to address you this evening on the subject of a race about which the ordinary Englishman has as yet attained only an imperfect knowledge. Most of us learn what we know of distant races when attention is called to them by war, by some great disaster, by the travels of some bold explorer. But these jungle-folk whom we have to consider to-day have hardly ever resisted the British arms; their country has been so little explored by scientific travellers that about a century ago when it first came under our rule it was a *terra incognita*, peopled by races of whom wild tales were told, like those which delighted the ancient and mediæval world—tales of cannibalism, of men who covered themselves with their ears as they slept, and other common-places of folk-lore. Of Central India the first real account was that prepared by Sir Richard Temple soon after the Mutiny. Since then every corner of these hills and jungles has been explored by a succession of English officers, and a large amount of valuable information has been obtained about these races, much of which lies forgotten in mouldering libraries or in musty blue-books.

But it is only within our own day that more attention from the point of view of ethnology has been directed to these people. This is the result of that wider interest felt in regard to anthropological studies, which is one of the leading characteristics of the science of our generation. It was seen that we had here within easy reach of European observers a congeries of races the investigation of which was likely to furnish much information to the students of the new science. They had lived for countless ages in a state of comparative isolation; it was clear that their origin and distribution suggested a most interesting series of ethnological problems; and while in the recent past Brâhmanism, that most active of missionary faiths, had largely influenced their beliefs, it came to be admitted that these so-called indigenous religions had in the early past profoundly affected Brâhmanism. It was obvious, too, that if their social polity and creeds deserved enquiry, no time should be wasted. As the newspaper and Board School are playing havoc with our native folk-lore, so the Hindu missionary, the ascetic, like the Jogi and Sannyâsi, were gradually bringing them within the Brâhmanic fold, and it was certain that before long much that was interesting and characteristic would be utterly lost. It was also generally admitted that the accounts of the early observers left much to be desired in wideness and precision. The modern

student of ethnology requires much more detail in the investigation of custom, ritual and folk-lore than his predecessors.

Hence came the plan of a systematic Ethnographical Survey of Northern India, which was designed to provide a detailed enquiry, based in the main on anthropometry, into the relations of the existing races to each other; and, secondly, a minute exploration of their customs of birth, marriage and death rites, social organisation, religion and folk-lore was proposed. This was carried out first for the great Province of Bengal by Mr. H. H. Risley; it was next undertaken and completed by myself for the North-Western Provinces, and the work is now in progress in the Panjâb and Behâr.

It is mainly the general results of this survey that I venture to lay before you as affecting the jungle tribes and their kindred in the lower settled country. For the people occupying Bengal we have the researches of Colonel E. T. Dalton and Mr. Risley. In the North-Western Provinces I was fortunate enough to hold for five years the post of magistrate of the immense district of Mirzapur, the last refuge in that part of the country of many interesting tribes. Marching through their forests year after year, living amongst them for months at a time quite isolated from other Europeans, continually joining them in the search for big game, a European who observes them with interest and sympathy can hardly help gaining some useful knowledge. But unhappily the Indian official has little spare time to devote to pure ethnology. The cares and responsibility of a district containing a million and a quarter of souls ever press heavily upon him. Hence come the inevitable incompleteness and shortcomings in his ethnological work, which is, as it were, only one chapter in the round of his official life.

Before we can discuss the Central Indian hillman in any detail we must try and form some general idea of his environment. A night or so in the train conveys the new-comer to Indian soil from the sea border which Bombay guards up the slope called in vernacular parlance the Ghâts or steps, the low hills which form the western bastion of the Central Indian plateau. Then begins what is known in various parts of its length as the Sâtpura, Kaimûr or Vindhyan range, which may be called the backbone of the Peninsula. To the north of it lie the alluvial valleys of the great Indian rivers—the Panjâb and Sindh, the basin of the Indus and its tributaries, the deserts of Râjputâna, the North-Western Provinces and Oudh, the valleys of the Ganges-Jumna river systems. In wealth, political and strategical importance, in historic interest, this is much the most important portion of the Empire. South of the central range of hills comes the plateau of the Deccan or Southern land, and thence down to Cape Comorin lie what are known as the Presidencies of Bombay and Madras, the dominions of the Nizâm of Haidarâbâd and the kingdom of Mysore.

This range of hills, then, runs almost continuously from west to east for a distance of some eight hundred miles. The highest peaks of the range are little more than 4,000 feet high, not more than our Ben Nevis; but nowhere are they arranged on any well-defined system. Here the scarp is high and well-marked

there it slopes gently to the plain below; parts of it are quite unculturable, miles of rock and boulder covered in places with very scanty vegetation; here and there are little fertile valleys, small pockets of verdure amidst the cliffs and jungle. Nowhere is the jungle really heavy in the sense of our popular conception of a tropical forest, like that, for instance, along the course of the Amazon, where the giant trees close in at the summit and exclude air and light, vast masses of tangled creepers, wastes of malarious greenery. But none of these will you find in the jungle with whose folk I am trying to make you acquainted. Here the jungle consists of low scrubby thickets of trees usually armed with most insinuating thorns; whatever heavy timber ever grew on this arid soil has long ago fallen beneath the woodman's axe or has been destroyed by constant forest fires. In fact, the soil is too poor, the moisture too deficient except for the three months of the annual rains, the sun's heat too fierce to permit the growth of any luxurious vegetation. Hence we naturally find a notable absence of animal life. The popular conception of a real jungle is a place where you can turn out a tiger, a buffalo or a stag at every acre, or may tread upon a cobra at every step. But here this is not so. A tiger in a country like this needs a range of some forty square miles to supply himself with food, and the deer and the wild pig live only where there is a tolerably permanent supply of water. It is in truth a dreary land, at one time baked like a brick by a relentless sun, at another soaked by almost constant rain, at a third reeking with malaria as the heat draws the surplus moisture from the soil. Agriculture, again, is restricted by the small available area. The thin coating of loam on the hill sides will not admit of constant cultivation; so another plan is invented—a patch of jungle is cut down, the stumps remain in the ground, but the leaves and branches are collected and burnt. The ashes are roughly scattered over the surface, which is broken up by the national tool, the digging stick. This is merely a branch of a tree with the end armed with a spike, a distinctively savage implement from which by a regular series of evolution sprang our modern plough. When the field is supposed to be ready, the seed of the rice or millet is scattered over it, more abundantly at the top of the slope so that it may be washed down towards the bottom by the coming rains.

But when the crop is sown the troubles of the husbandman are only beginning. He is beset on all sides by Nature's beggar-men—the deer, the wild pig, the green parrot, the grasshopper. So he has to gird in his patch with a dense mass of thorns, like what our troops in the Soudan call a zeriba, and he has to sit up at night and fire his old matchlock now and then to scare the beasts. At dawn when he goes home to eat and rest he is replaced by his wife or little boy, who sits all day on a platform and flings stones out of a sling at the parrots. Needless to say, he has no means of watering his crop, and if the rains fail he gets nothing.

The natural consequence is that he would starve one year in every five or six if he possessed no other resources; and his only feeding ground is the jungle. In

the first place, it gives him some animal food, but not much. Game is far from plentiful, and most animals are, from his point of view, shamefully wide-awake. His weapons, the bow and his old rusty matchlock, are wretchedly ineffective, and he wounds many a beast which he does not bag. His needs make him the very antithesis of what we call a good sportsman. He will sit over a water-hole and kill, if he can, any beast that comes to drink: stag or hind or fawn are all the same to him. He will lay snares or dig pits round his field with stakes or nooses cunningly arranged, and leave a tempting hole in the thorn palisade through which the poor creature creeps to his death.

But besides this he has sources of food in the myriad fruits, berries, and nuts which the jungle provides. Any of us let loose in such a place with a pointed stick as our only tool would perish straight off of starvation. But the jungleman knows what to dig for, and feeding stuff of some kind or other he can nearly always find. Or if he chance on something poisonous or unwholesome he knows how to scrape and soak it so that its dangerous properties are removed. When a Korwa young lady is married her papa in the fine broad style of the jungle-dweller points to a hillside and says, "Here is your domain," and such rights are acknowledged, as with us a crossing or a tramp's beat becomes a property.

But let no one delude himself into the belief that there is much charm about such a way of life. To those of us who are satisfied with a little French cookery, an *entrée*, a bird, a savoury, the jungleman's dinner is sure to be most unsatisfactory. He will eat game which he admits to be a little "high," but which we should call carrion, and his roots and fruits are many of them in the nature of the basest hips and haws which a respectable British blackbird would turn up his beak at.

One thing he does acquire by this course of life is a marvellous insight into Nature and her secrets. His eyesight or power of hearing is not, I think, by nature much better than ours, but he will hear or see a tiger creeping down a ravine long before the English sportsman will. Every sound in the forest has a meaning for him—the grunt of the baboon as the tiger comes beneath his tree, the hoarse alarm bark of the stag. From the way the vultures hover in the air he will tell whether the tiger has finished his meal or is still tearing the carcase. Every foot-mark, a displaced pebble, a broken grass stalk will tell him something, what beast has passed there and how long ago. We of late hours and crowded rooms and artificial light look on such powers almost as a miracle; but it is really only the result of the fact that he has thoroughly adapted himself to his environment, and this he must do or starve.

The problems of North Indian ethnology, then, centre round the interrelation of the two stocks popularly known as the Âryan and Dravidian. The ordinary theory which has come to be included even in our school-books tells us that a race known as the Âryas, or nobles, lived somewhere to the north of the peninsula, in what are called the Pamirs, or somewhere beyond the Hindu Kush, or even in the forests of Lithuania. From this central point, wherever it may have been, there

is said to have occurred in early times a great dispersion. This gave rise to the existing European races as well as those of Persia and India, of whom we ourselves are kinsmen, a sort of distant cousins.

The objections to this theory are that it is in the main based on philology, which though an important ethnological factor, is not a final test of race; and, secondly, that, particularly in Europe, investigations of the barrows, the burial places of the prehistoric races, have shown that a large part of the population still resembles in type the earlier races who lived in those countries, associated with extinct animals like the elephant and cave-bear long before the earliest date which can be assigned to the inroad of the Aryans.

To return to the Dravidians of India, a name derived from the Sanskrit *Dravida*, usually applied to the country known as the Coromandel Coast, stretching from Madras to Cape Comorin, and itself probably of non-Aryan origin, the most probable theory suggests Northern Africa as the earliest seat of prehistoric man, and many indications tend to show that his evolution from the anthropoid apes may have occurred there in the Pliocene age. From this centre of dispersion it is probable that Europe was peopled by the earliest races who were either pre-glacial or inter-glacial, that is to say, occupied the country before the Ice Age or in a break between two advances of the ice crust. Another section of the same race probably passed eastward along the Indo-African continent which was then continuous, the intervening space, which is now the Indian Ocean, being dry land of which fragments are represented by a group of islands or shoals, such as Madagascar, the Amirante, and Seychelles Islands. Survivals of these colonists of the Negrito type possibly occur in the Veddas, a degraded jungle tribe in Ceylon, and in the hairy-faced Todas who are familiar to ethnologists as occupying the Niligiri plateau in Southern India and practise a remarkable form of fraternal polyandry.

As regards the existing races of Central India, the absence of distinctly woolly hair, which, though it may appear in occasional isolated types, has never been distinctly traced as a general racial characteristic, coupled with their lack of prognathism and brachycephaly, is a difficulty in assuming the prevalence of a distinctly Negrito type in the present population. Before this question can be definitely settled we need much further anthropometric evidence from Eastern Africa to admit of detailed comparison with the Indian races. It is possible that further investigations may modify the current theory as to the Indo-Negrito element. Thus, the Nâgas of the Assam-Burmese frontier usually classed as Mongoloid, have a cast of features which present some analogy to the Negro tribe as will appear from the pictures which I now proceed to show you.

3. Here we have a picture of an Angâmi Nâga, a chieftain who commanded against us in the fighting at Kohima and Khonoma.

5. A Lhota Nâga boy.

6. Lhota Nâgas.

7. Mao Nâgas.

8. Rengma Nâgas.
9. Tablung Nâga woman.
10. Jaypur Nâgas.
18. The Namsingia head-dress.
19. Angâmi Nâgas in festival costume.
21. Angâmi Nâga, interpreter.
24. Kûki women.

But as regards the Dravidian element in the races of Central India, it is now generally admitted that their origin must be sought for elsewhere. "In the Dravidian type," to use Mr. Risley's<sup>1</sup> summary of the anthropometric evidence, "the form of the head usually inclines to be dolichocephalic, but all their other characteristics present a marked contrast to the Âryan. The nose is thick and broad, and the formula expressing its proportionate dimensions is higher than in any known race, except the Negro. The facial angle is comparatively low; the lips are thick, the face wide and fleshy, the features coarse and irregular. The average stature ranges in a long series of tribes from 156.2 to 162.1 centimetres (5 feet 1½ inches to 5 feet 3¾ inches); the figure is squat and the limbs sturdy. The colour of the skin varies from very dark brown to a shade closely approaching black." The most distinctive type of Dravidians is found among the Mâlê Pahariyas of the Râjmahal Hills and the Mundas and Orâons of the Chota Nâgpur plateau.

But it would be a mistake to suppose that we have here a single race with uniform physical characteristics. Perhaps it may be easier to make this fact apparent from photographs of some representative groups from the North-Western Provinces which I shall now exhibit.<sup>2</sup>

14, 15. Here you have a group and a single man of the Korwa tribe, perhaps the most primitive race surviving in these provinces. They live in small isolated communities, supporting themselves mostly on jungle fruits and roots, a curiously shy people who have come little into contact with Europeans. In one of their villages which I visited only one old man had ever before seen an Englishman, and that when he was a boy. They are men of a fine vigorous type, but those represented in these pictures range between only 5 feet and 5 feet 5 inches in height.

16. The next group, called Biyârs, are rather more Hinduised than the Korwas; here the higher of the two is only 5 feet 3½ inches high.

17. Next come a pair of Parahiyas or Hillmen, who have, as you will observe, more marked Dravidian characteristics.

18. These are followed by a Gond, hardly a good representative of the more primitive branch of the tribe who live further south in the Central Provinces.

19. Next comes a Panka, a village weaver and serf in the hills.

<sup>1</sup> I, *Intro.*, xxxii.

<sup>2</sup> These pictures are reproduced in Crooke, *Tribes and Castes of the North-Western Provinces*,

20. Following him is a family of Patâris who are the family priests of the Majhwârs, a tribe closely allied to the Gonds.

21. Next comes a Ghasiya, a very good example of an almost pure Dravidian.

22. Next comes a Bhuiyâr, who, as you will observe from the breadth of his nose, is a tolerably pure Dravidian.

23. Following him is a party of Mânjhis or Majhwârs, who are almost pure Gonds. They carry, you will observe, the Mândar or sacred drum of the tribe, the body made of earthenware, and the ends covered with goatskin. It occupies an important part in the religious rites of the tribe.

24. These are followed by a party of Cheros, also fairly pure Dravidians; but here it is necessary to distinguish, because one branch of the tribe has become largely Brâhmanised, while others retain much of their primitive character.

25. Next I show a family of Kols, known in Bengal as Hos or Mundas, from whom a branch of the Dravidian race has been called Kolarian. But recent enquiries have shown that the distinction between the Kolarians and the other Dravidians is merely linguistic and not based on any really physical differentiation.

26, 27. In the next two pictures we have the Agariya, the primitive iron-smelter of the hills. Interesting questions arise as to the origin of this industry, on which I may say something later on. Here you will notice the double goat-skin bellows, which he works with his feet, and the hammer of a form closely approximating to the neolithic type, with which he beats out the charcoal and other impurities from the ingot.

29. Lastly, comes a representative of the Hill Doms, who take many forms, from that of an artizan in the lower Himalaya to a singer, and finally, the most degraded outcast in the Plain country, a worker in bamboo, a houseless wanderer, a thief, a scavenger, whom even to look at is, for a pious Brâhman, a pollution.

I pass on to consider the connexion between these Hill Dravidians and the great servile or agricultural population of the Plains, by which I mean generally the valleys of the Ganges and Jumna, that vast mass of simple, peaceful, orderly people, whose chief fault in our eyes is that they propagate their species without any regard to their resources, and are thus a constant burden upon the country, while in seasons of drought, as in recent famine, they become a source of enormous expense and anxiety to the Administration. What we have now to attempt is to examine how these people are related to the Dravidians of the Hills, and perhaps I cannot introduce this part of the subject of my paper better than by showing you a few typical representatives of them, so that you may be able to form some comparison between the two groups.

1. Here, then, we have, first, a couple of Chamârs, the old man holding up in his hands a pair of ordinary country shoes. The Chamâr is primarily a tanner or currier, as his name implies, and from his association with hides, and particularly that of the sacred ox, he is detested by orthodox Hindus. But besides working

in leather, he also farms, does field work and general village drudgery. English officials are often accused of talking in lakhs. But some idea of the difficulty of dealing with these lower races may be expressed by the fact that of these Chamârs alone we have in the North-Western Provinces nearly six millions, about half as much again as the population of Scotland.

2. Next come representatives of an interesting set of people, the Banjâras, who are wandering carriers of grain, with a curiously distinctive dress, perhaps the most interesting race in the Plains, now being seriously affected from the competition of the railways with their hereditary industry.

3. Following these we have the Banya, the corn-chandler, pawnbroker, money-lender, the Shylock of India, hardly a popular personage to those who get into his books, but a sound capitalist, without whom the Empire would be hard set to pay its way.

4. In the next picture we meet another class, the Fakir or so-called ascetic, the idle, loafing vagabond who wanders about the country begging alms. In the North-Western Provinces there are no less than two millions of these sturdy beggars, nearly half that of the county of London, one in every twenty of the whole population of the Province.

5. With him I give a Vaishnava Fakir, one of that class of ascetics who derive most of their inspiration from the teaching of Buddha, and in particular a very careful regard for all kinds of animal life.

6. Next, as illustrating the so-called Âryan branch of the people we have a group of Brâhmans, the Levites of the Hindu community, primarily priests, but also working as clerks, soldiers, husbandmen, and other occupations regarded as pure.

7. The next picture is intended to show the common dress of the women of the Plains.

8, 9. This is followed by two husbandmen ploughing, one a Jât, one of our finest North Indian races; the other a hillman.

10. In the next picture we have a group of Mahâbrâhmans, the funeral priests of the Hindus, not real Brâhmans of the learned priestly class, but a lower class of officiants drawn from some of the lower races. It is needless to say that their duties cause them to be abhorred and despised.

11. Represents one of the Dravidians of the Plains, a Bind, who is a menial labourer and cultivator.

12. Shows a variety of the Dom race of whom we have already seen an example from the hills. This is one of the sub-caste of Dharkâr, who are partially civilised and live by working in rope and bamboo.

28. Another set of Doms.

13. Lastly, to show quite another type comes a group of Bhotiyas from Tibet, pure Mongolians, perhaps the only Buddhists whom we are likely to meet in the Plains.

We are now in a position to discuss the racial affinities of these Dravidians within and without the Indian Peninsula.

We have seen that the Southern Indian tribes, such as the Todas, possibly represent a fusion of Melanochroid Caucasian and Austral-negro blood at a remote period in a now submerged Indo-Austral region. But, as has been shown, the absence of prognathism and woolly hair forbids us to find in the Dravidians of to-day anything like a strong Negrito element. It has been the habit to regard them as Mongoloid, but Mr. Risley's investigations render this improbable. It seems preferable to regard them as belonging to a second and independent migration from the direction of the original African headquarters, which possibly passed into Asia by a more northerly route than that of the primitive Negrito element, traceable in the Veddahs and Todas. This type varies on the one hand with assimilation to the earlier Negritos: but more particularly by fusion with what we popularly call the Âryan stock.

It must, however, be remembered that the aggregate of tribes popularly known as Âryan has been so grouped mainly on linguistic, not racial character. It has been assumed that there was an original Ur-Âryan tongue from which the Âryan languages were derived by regular descent. But the original home of these Âryans has never been satisfactorily ascertained. Opinion seems now to be inclined to regard these Âryans as not one simple "ethnic stock, but an amalgam of many Caucasian and no doubt some Mongoloid elements, leavened by an original Xanthochroid strain, and endowed with a certain racial uniformity by the immense preponderance of the Caucasian physical character and by the general adoption of Âryan speech, traditions and institutions."<sup>1</sup>

On the fact, then, of the allied origin of the Âryan and Dravidian races, or in the continuous amalgamation of these two strains of blood seems to depend the remarkable fact that, as shown by an examination of the cephalic indices, there is a striking uniformity in the existing races occupying Northern India. The consideration of this question depends on the survey of a vast mass of statistical evidence with which I must not trouble you at present. The results have been summarised by Mr. O'Donnell for Bengal, and by Surgeon Captain Drake-Brockmann for the North-Western Provinces.<sup>2</sup> Thus, generally speaking for the latter, taking four main castes—the Brâhman representing the Âryan, the Kâyasth Medium Âryan, the Chamâr Hinduised Dravidian, the Kol fairly pure Dravidian, the cephalic indices are respectively 73·7, 73·3, 73·9, 73·8. For Bengal Mr. O'Donnell writes:—"It thus appears that the Brâhman is at one end of the scale and the cultivated Kâyasth at the other, whilst at the top of the Behâr list the fisherman, priest, farm-labourer, landlord and cow-herd are in close proximity. In the North-Western Provinces the Kshatriya or Râjput soldier, and the Khatri or Râjput trader stand at opposite extremes—rat-catchers, carpenters, dancing women, cultivators, toddy-drawers, and priests coming in between. No evidence could be more convincing, if anthropometry has any meaning. The Indian races and tribes in the valley of the Ganges from the Afghân frontier to the Bay of Bengal are so

<sup>1</sup> Keane, *Ethnology*, 410.

<sup>2</sup> Crooke, *Tribes and Castes of the North-Western Provinces and Oudh*, i, *Intro.*, xxx seqq.

absolutely intermingled in blood, that it is impossible to discriminate between the skull characteristics of the castes or functional guilds which have grown up under later Brâhmanical usage."<sup>1</sup>

Here the case is perhaps put too strongly; but it to some degree justifies the distrust felt by one school of anthropologists in the value of skull measurements as a final test of race.<sup>2</sup> Hence another factor, the breadth of the nose, has been selected as a criterion. Even the most casual observer cannot fail to remark the basal breadth and coarseness of the Dravidian nose as compared with this more finely moulded feature in the higher races. Mr. Risley has gone so far as to say that "it is scarcely a paradox to lay down as a law of the caste organisation in Eastern India that a man's social status varies in the inverse ratio to the breadth of his nose."<sup>3</sup> Here again, as Mr. O'Donnell and Surgeon-Captain Drake-Brockmann point out, there are startling variances in the figures, which illustrate the necessity of caution.<sup>4</sup>

In the present state of our knowledge, then, on this subject the most reasonable view seems to be that while on the whole there is a remarkable uniformity of type judging from the skull measurements of the races of Northern India, and the pure Âryan type is not so readily separated from the Dravidian as it has hitherto been the habit to suppose, there may be minor or subsidiary variations in the cranial form which may lead to clearer knowledge. The total population of these three great Provinces, Bengal, the North-Western Provinces and the Panjâb is about one hundred and forty millions (Russia in all contains about one hundred and thirty millions). The number of measurements hitherto made is quite inadequate to form a sure basis for deciding the ethnical affinities of such enormous masses of men. Besides this much investigation on the East African side will be required before the materials for decision are available. The obvious moral is that measures are urgently needed for the prosecution of anthropometry in this part of the world on a much wider scale than has hitherto been attempted.

The inference suggested by this summary of results is then, that the so-called Âryan invasion of the Peninsula probably assumed a form quite different from the usual conception of it. It was apparently never an invasion in the common sense of the word, an inroad of a fully organised nation, overwhelming and enslaving the indigenous races, such as was, for instance, that of the Turkish tribes into Europe. The colonisation of Central Asia by the Mongol races probably took place through the Indian Peninsula, and this was followed by a continuous southward movement of the Âryans which was only part of that great series of emigrations which went on continuously during prehistoric times. Their incoming may have been gradual and spread over vast eras of time: it may have taken the shape of successive waves of colonists, never very numerous, and establishing their superiority more by the influence of their higher culture than by actual brute force. In some places

<sup>1</sup> Crooke, *Intro.*, cxxxvii.

<sup>2</sup> Keane, *ibid.*, 177.

<sup>3</sup> Risley, *ibid.*, i, *Intro.*, xxxiv.

<sup>4</sup> Crooke, *ibid.*, i, *Intro.*, xxviii *seq.*; cxxiii.

they may have become real over-lords of the races which they found in the country: in other parts the conquered may have absorbed their conquerors. This theory would in a measure account for some of the most difficult problems in the ethnology of upper India—the increase of dolichocephaly towards the north-west frontier, the prevalence of a higher type in Râjputâna on the fringe of the western deserts, the occurrence of the Jâts and Gûjars in the valleys of the Indus and Jumna, who possibly represent an independent body of colonists. It would also explain the gradual spread of the Âryan culture towards the East as marked by successive stages of occupation from Âryavartta, the sacred land of the Âryans in the Eastern Panjâb to Indraprastha or old Delhi on the Jumna, thence to Hastinapura on the Ganges, to Ayodhya on the Sarju, and later on along the Gangetic Delta.

This line of argument, again, suggests what seems to be a prevalent misconception of the character of the conquest of the pre-existing races by the Âryans. The common view is that the pure Dravidians, as we now find them along the hilly backbone of the Peninsula, were pushed back into these inaccessible retreats, as the Celts were driven into Wales by our Teutonic forefathers, the existing races of the Plains being that portion of the earlier people which was conquered and enslaved. This theory, however, seems to be inconsistent with what we know of the method in which conquering races occupy a tropical or semi-tropical country. Such occupation does not follow the line of the fertile plains and rich alluvial valleys, simply because the lowlands are generally covered with impenetrable forest, swarming with dangerous beasts and more dangerous malaria. It rather follows the course of the lower hills which flank the riverine valleys. Hence it seems not improbable that the original seat of the Dravidians may have been in the mountainous region where we meet them at present. The earliest Âryan legends strongly suggest the conclusion that the lowlands were even in their time an inaccessible jungle, such as travellers of to-day find in the valleys of the Amazon and its tributaries. The forests along the skirts of the alluvial tract were probably then as they are now, comparatively open. If the arrival of early man in India was, as may have been the case, antecedent to the geological convulsions which raised the Siwâlik range, the Ganges valley may then have been a tidal estuary, becoming in the course of time gradually silted up by the detritus of the great Himalayan rivers, and as it grew became clothed with thick malarious jungle.

It seems not improbable, then, that it was in the southern plateau that the first Dravidian settlements were formed. Then as now they may have supported life mainly from the products of the fairly open jungles which formed their early home, and there they evolved those rude industries which form their mode of livelihood even to the present day.

This suggestion seems to be confirmed by the fact that it is not in the rich alluvial plain, but on the southern plateau that we find the remains of the most primitive life, the dolmens beneath which they buried their dead, the menhirs which marked the graves or formed a home for the ghosts of their famous chiefs or

priests, the rude stone implements with which they waged war on the wild beasts. There is, I believe, no instance of the occurrence of such remains *in situ* in the river valleys of the north. They abound in the southern hills and in some places as at Kon in Mirzapur, I have myself seen one of the primitive factories where these weapons were chipped and ground.

Further, there seems little doubt that these people were up to comparatively recent times in the Age of Stone. This is shown by the forms of the implements which they use to the present time, which distinctly reproduce in metal the neolithic forms. Less certain is the evidence from rock paintings in the Vindhyan caves discovered by Mr. J. Cockburn, which are said to represent the slaying of the Sâmbhar stag and the rhinoceros by jungle-folk armed with stone weapons. These need not necessarily be very ancient, as the Sâmbhar still abounds in these hills and Akbar, a contemporary of Queen Elizabeth used to hunt the rhinoceros near Chunâr. As Dr. Ball has shown, the Khariyas appear to have been in the Stone Age quite recently.<sup>1</sup>

The same result is arrived at from certain survivals in custom, in which iron is regarded as a substance invested with mystic powers, and the iron-founder supposed to be a sacred or uncanny personage—a feeling which I need not remind you is a wide-spread feeling among savages. Thus, the Magahiya Doms—a very primitive race—boycott any member of the tribe who uses an iron implement in committing a burglary. These people in taking an oath clear a piece of ground and plaster it as if for sacrifice; they then swear on a piece of iron and a copper coin placed in the centre.<sup>2</sup> So the Pankas, pure Dravidians, swear on a piece of iron placed in a drinking vessel; and the Nats make their oath on a bit of copper.<sup>3</sup> The same feeling shows itself in the very common use of iron, copper or brass as scarers of demons. The young mother, the bridegroom, the mourner under taboo all protect themselves with one or other of these metals.<sup>4</sup>

I have referred to the iron manufacture carried on by the Agariyas. It would be an interesting problem, with which I have now no time to deal, to inquire whether this was an independent discovery made by the Dravidians or taught them by the Hindus. Iron, though known to the early Iranians, does not appear in the literary monuments of the Hindus till the close of the Vedic period, and then, as in the Homeric poems, seems to have been scarce and valuable. The wonderful iron pillar at Delhi, perhaps the oldest iron monument in the country, is 60 feet long and weighs 17 tons. How such a mass of wrought-iron could have been forged is a standing wonder to metallurgists of our time. It bears an inscription dated in the third century of our era. How much older it may be no one dares to say. Needless to say we have no literary evidence within the Dravidian area, and, as far as I am aware, no definite tradition regarding its origin. It is

<sup>1</sup> *Jungle Life*, 91.

<sup>2</sup> Crooke, *ibid.*, ii, 331.

<sup>3</sup> *Ibid.*, iv, 117, 75.

<sup>4</sup> Crooke, *Popular Religion and Folk-lore of Northern India*, ii, 11, 15.

possible that indications of the origin of the art in Central India may be found in the shape of the furnace or bellows and in the mode of manufacture.

I would suggest, then, that the present Dravidian jungle-races may have occupied their present settlements from the very earliest times, and that so far from having been pushed back into the rugged hill tract by the advancing Âryans, the course of their migrations may have been very different. Possibly the impulse to clear the fertile alluvial valleys may have come from the Âryans, a race of farmers and breeders of cattle. In this task they were probably aided by bodies of Dravidians migrating from their forest homes and gradually losing their identity in the presence of a people of superior energy and intellectual power. To this day the Dravidian, like the Thâru of the marsh lands at the foot of the northern hills, is the great pioneer of civilisation. It is he who is gradually converting these immense fens and savannahs of grass and reeds into fertile rice fields. This may have been the task of the Dravidian race for countless generations; even now as in the past his work, one of enormous importance to the world, has met with no recognition. This task he is able to perform, because, though not malaria-proof, he endures it better than the other races.

But there is another impulse working in the same direction which it needs an imaginative savage thoroughly to understand. Among primitive people accustomed to the belief that disease is due to evil spirits, it has ever been a desire to seek communion with the divinities of earth and hill and jungle, who are in their belief the active agents in bringing sickness and death. Obviously the denizen of the jungle is more likely to be in communion with these local powers than the foreigner, and without his aid forest reclamation could hardly progress. Hence it comes that even to the present day the priests of the local gods, both in hill and plain are recruited from the most secluded and least progressive of the jungle-folk.<sup>1</sup> I may go even farther than this, and suggest that as the Majhwâr Gonds have selected out of their own body a class of local priests, the Patâris, the example may have led to the evolution of the Brâhman priest on Indian soil, when the advancing intricacy of religious ritual demanded the services of a functionary more skilled in the art of spells and incantations than the original Âryan house-father priest. From this point of view it is significant that some branches of Hindu ascetics, such as the Jogi and Sannyâsi, retain many practices which, whatever be their origin, are obviously not Hindu. Thus, they do not wear the scalp-lock; they either never cut their hair or shave it off completely; they never burn their dead, but bury them or fling them into rivers, and when they bury they place the corpse in a sitting posture with the arms supported by a crutch—all customs quite opposed to Hindu ritual.<sup>2</sup>

The same feeling in regard to the jungle-folk comes out in certain rites and privileges which they enjoy to this day. Thus, the Khangârs act as marriage

<sup>1</sup> Risley, *Tribes and Castes*, i, 475; ii, 83, 309; Crooke, *Tribes and Castes*, i, 8; ii, 85, 333; iii, 322; *Popular Religion*, ii, 95.

<sup>2</sup> Crooke, *Tribes and Castes*, iv, 275.

priests for the Bhadauriya Râjputs; one of the Mina tribe always invests the Mahârâja of Jaypur, a Hindu of the Hindus; the Sânsyas, a nomadic thieving race, act as bards and genealogists to the Hindu Jâts.<sup>1</sup> To this day the special function of watching the fields at night in Hindu villages is assigned to Dravidians, apparently because as owners of the land they are more in touch with the jungle and its beasts, with the evil spirits which walk in the darkness.

This brings me to another branch of my subject which is perhaps of wider interest than the ethnological questions which we have thus hastily surveyed. What we have now to note is some survivals of primitive custom. Their religion, a compound of animism, fetishism, and a crude demonology, is beyond the scope of this paper.

This is the place for the explanation of a fact which has given rise to some criticism. It is generally admitted that for many of these tribes there is ample evidence that at one time they passed through what is called the totemistic stage. We find numerous sections the titles of which are obviously drawn from sacred animals, plants and other objects; we have many instances in which the section ascribes its origin to the so-called totem; there are many cases in which the totem is treated with respect, and any attempt to destroy or injure or eat the totem is prevented by a rigid taboo. On the other hand, many instances might be quoted where a section which on these indications might be treated as totemistic does not specifically taboo the assumed totem, or rather, if we may put the case so, transfers the taboo to something else which is not the tribal totem. This, on the face of it, suggests doubt as to whether these tribes did ever pass through the totem stage, or whether the original idea may not have been so worn away or overlaid by other and antagonistic beliefs that nothing now remains but the bare husk of the primitive belief, and this may in later times have originated from another line of thought. Thus, to give a single instance, when we find the totem belief in this stage of degeneration, it is open to any one to say that the connection of the sept or section with the sacred beast or plant is merely a case of tree or animal worship, and need not necessarily imply that the worshippers of it were ever consciously in the totem stage. This view of the case is, no doubt, in some instances correct, and it is quite possible that some usages and beliefs have been from time to time labelled as totemistic which may be explained in another way. When we have to deal with the mere husk of a custom or rite caution is clearly necessary, and some of us who have been carried away by the suggestiveness of the totem theory, which threw novel light on many obscure facts, and enabled us to bring at least into a semblance of order many conceptions which were merely isolated fragments of belief destitute of any reasonable meaning, may have gone too far. This is not to say that in the present stage of the controversy the totem theory must be altogether abandoned; rather that it may be necessary in some cases to revise our co-ordination of the evidence, or perhaps to admit that there is no common master-key to all the mysteries, and that while the human

<sup>1</sup> Crooke, *Tribes and Castes*, iii, 229, 490; iv, 279.

mind works with curious regularity through the whole range of savage thought, the local factor, or what the mathematicians call the personal equation, must be more closely weighed. But to return to these Dravidian clan taboos and the curious variances which they present—one point must be kept carefully in mind. Nowadays most of the leaders of the totem school are prepared to admit the weakness of the evidence for totemism within the so-called Âryan area. Here possibly tree and serpent or animal worship will be found to explain most of the facts without the necessity of calling in the aid of totemism. This fact profoundly affects the question of the Dravidian taboos. Here, I imagine, we can watch the conflict of two sets of beliefs, which has modified the primitive tradition. The Hindus, for instance, protect the cow by a powerful religious sanction, while the Dravidians used to sacrifice and eat her. So the Dravidians used to live on many jungle-beasts which the Hindu considers impure—the rat, the squirrel, the lizard, the crocodile. At present it is only the casteless, vagrant tribes in the Plains which have been able to resist the pressure of the superior race to class such creatures as abominable. Here and there the custom is in process of change, the more Hinduised members of the tribe, with a view to social advancement, adopting rules which prescribe extreme purity; the more conservative or less advanced section adhering to the primitive practice, but in some cases with real or assumed secrecy.

Thus, under Hindu influence there has been a tendency to replace the old totem or sacred beast by some eponymous ancestor drawn from the ranks of Hindu saints or worthies, and here often the familiar influence of folk etymology comes into play. Thus Rikhmun, the divine ancestor of the Bhuiyas and Musahars, who is called a deified Rishi or saint, is probably in reality Riksha, the bear: so Kachchapa, the tortoise, has become the saint Kasyapa, and Bhâradvaja, the lark, turns into a third Hindu worthy.

With so much reservation about totemism, we may say that among these people it appears specially in connection with marriage, the primary social unit being what may provisionally be called the totem clan, which is exogamous; marriage and sexual intercourse between members of the clan being severely forbidden. Later on, as under Hindu influence the totem link became weakened, it became necessary to invent special titles or watchwords to define the exogamous groups, as we find in the case of the Santâls and Halwâis, among the latter the passwords being embodied in a series of mnemonic metrical formulæ.<sup>1</sup> These exogamous sections or septs later on became combined into the existing tribes, and this combination appears to date from the period of the adoption of descent through the father in lieu of the matriarchate, which, as we shall presently see, was probably the primitive rule. The method in which this amalgamation takes place may be illustrated by the analogous process among the West African tribes. Thus one of the Dog clan marries a Leopard; under the old system the children would be Leopards; but when the father's share came to be recognised they would

<sup>1</sup> Risley, *ibid.*, ii, 227; Crooke, *ibid.*, ii, 482 *seq.*

be Dog-Leopards, and would so belong to two clans. These children in the same way marry into two clans, the Cat and the Snake, and their offspring would belong to four clans.<sup>1</sup> This system would obviously soon become unworkable and the clan rule has to be replaced by some other formula, as, for instance, by prohibiting the marriage of any descendants of a common pair or tabooing the intercourse of cousins, which is actually what has happened among the more advanced Dravidians, while the Gonds marry cousins by preference.

There are also various indications which go to show that in India this tribal syncretism may be of comparatively modern date. This is shown by the adoption of a purely occupational title for the tribe which is the result of such an amalgamation of septs or sections. This is the Hindu method. Among the Dravidians the aggregate so formed is commonly designated even by a vaguer term, such as Bhuiya or "landowner," Ho or Kol, "men," Mânjhi, Majhwâr, "middlemen"; Pahariya, Dhângar, "hillmen"; and so on. And the same conclusion follows from the fact that the boundaries of many of these tribes are even now ill-defined. The Mundas, for instance, are recognised by the Khariyas as elder brethren; Mundas sometimes marry Khariya women, but will not give brides in exchange. So Kharwârs and Cheros are traditionally connected; the Cheros used not long ago to intermarry with the Bhuiyas, but the latter have refused connubium since the Cheros have taken to intermarrying with Kols.<sup>2</sup> Many of the lower tribes, again, habitually recruit their numbers from outsiders: others, like the Pâsis, admit the children of their women and care little whether the father was a tribesman or not.<sup>3</sup>

These combinations, again, display no real permanence. New groups are ever being formed and recombined on the basis of some change of custom, such as the abolition of the rule of infant or widow marriage, some taboo regarding food or the like. Thus, among the Bhuiyas of Lohârdaga and Mirzapur the old tribal system of exogamy seems to be falling into disuse, and many groups which were once exogamous are now endogamous.<sup>4</sup> So the Kurmis are giving up their old totemistic sections in favour of artificial groups.<sup>5</sup> All these races, too, have become conscious that the totem rule of exogamy does not prevent close intermarriage, so they have been obliged to reinforce it by the establishment of personal prohibited degrees which prevent the marriage of cousins or those directly descended from one common ancestor. New local sections are thus constantly formed, but with an inconsistency, in some respects natural, they still in some cases maintain the old grouping, or prefer to bury their dead in the ancient tribal cemeteries.<sup>6</sup>

It may also be suspected that the size of the group has considerable influence in deciding the question of exogamy or endogamy. This is clearly shown in the

<sup>1</sup> Ellis, *Yoruba-speaking Peoples*, 175.

<sup>2</sup> Risley, *loc. cit.*, i, 466, 473; Crooke, *ibid.*, ii, 106, 217.

<sup>3</sup> Crooke, *ibid.*, iii, 143.

<sup>4</sup> Risley, *ibid.*, i, 114; Crooke, *ibid.*, ii, 73.

<sup>5</sup> Crooke, *ibid.*, iii, 351.

<sup>6</sup> Crooke, *ibid.*, ii, 74, 174; iii, 169, 289, 337; iv 112. Risley, *ibid.*, i, 469; ii, 147

case of the vagrant tribes, who possess a form of horde exogamy in which marriage is prohibited within the gang, as in the case of the Sânsyas or Hâbûras.<sup>1</sup>

I have said that in all probability these tribes have passed through the stage of the matriarchate, or where descent is counted through females. It may be worth while considering what evidence exists on this point.

We have, in the first place, a long series of legends which attribute the descent of the tribe to a female ancestress, such as the Agarwâlas from Mâdhavi, the Musahars from Savari, the Kanjars from Nathaiya<sup>2</sup>; and this story in many cases takes the form of naming as the ancestress of the present clan a pregnant woman who was saved from the massacre which destroyed her brethren. This tale is told, for instance, of the Chamar Gaur Râjputs, the Ghatwâl Jâts, the Khangârs, the Thatheras.<sup>3</sup> Or, by another version, they spring from an innocent wife who has been discarded on some false charge, as the Mochis, the Kânhpuriyas, the Rors, who sprang from Sita when expelled by Râma Chandra, and Lakhana Deva, the founder of the Sombansis, was a posthumous son born in exile.<sup>4</sup> This, I need hardly remind you, is a very favourite *motif* of many folk-tales, as, for instance, in the Hindu tale of the Son of Seven Mothers.<sup>5</sup>

We have, in the second place, many cases in which the sister's son acts as the funeral priest. This is the case with Doms, Hâris, Tatwas, Basors, Berihas, Bhangis and other menial races.<sup>6</sup> In other cases this duty is assigned to the son of a female cousin or son-in-law. Among the Dhânuks, when a man is poor he feeds at the death rites only his sister's or daughter's husband; among the Bhuiyârs the sister's son is held in particular honour, and periodical gifts are made to him, as to a Brâhman.<sup>7</sup>

Thirdly, we find relations on the side of the bride acting in many cases as officiants at marriage. Thus, among the Bâwariyas, it is the husband of the bride's sister who acts as priest; among the Kanjars it is the sister of the bride, her husband or daughter, who performs the circumambulation rite; among the Bhuiyârs it is the bride's younger brother who pours rice over the pair.<sup>8</sup> Often, as among the Majhwârs, it is the sister's husband of the bridegroom who acts as best man, arranges the marriage or carries the bridegroom in his arms into the marriage booth.<sup>9</sup>

Even more important is the prominent part taken by the mother of the bridegroom in the marriage rites of the Musahars, while among the Majhwârs and

<sup>1</sup> Crooke, *ibid.*, iv, 279; ii, 474.

<sup>2</sup> Risley, *ibid.*, i, 5; Crooke, *ibid.*, iv, 17.

<sup>3</sup> Crooke, *ibid.*, i, 78, 195; iii, 33, 228; iv, 407.

<sup>4</sup> Risley, *ibid.*, ii, 95; Crooke, *ibid.*, ii, 118; iv, 244, 327.

<sup>5</sup> Temple, *Wide Awake Stories*, 101.

<sup>6</sup> Risley, *ibid.*, i, 245, 316; ii, 300. Crooke, *ibid.*, ii, 325, 335; i, 226, 246, 288; ii, 183, 285; i, 83.

<sup>7</sup> Risley, *ibid.*, i, 245. Crooke, *ibid.*, i, 246, 288; ii, 273, 95.

<sup>8</sup> Crooke, *ibid.*, i, 234; iii, 142; ii, 92, 62.

<sup>9</sup> Crooke, *ibid.*, iii, 422; iv, 65; ii, 291; iii, 244; ii, 87 *seq.*

Mârwaris she solemnly offers her breast to him as he is starting to fetch home his bride.<sup>1</sup>

Lastly, comes the important part played in the marriage rites by the maternal uncle or mother's brother. Thus he very often arranges the marriage of his nephew; or he is trustee of the bride's peculium; or he digs the sacred earth for the wedding; he takes round the wedding invitations; he lifts the bridegroom into the house of the bride; or the maternal uncle on each side give the wedding clothes or other gifts to their nephew or niece.<sup>2</sup> Finally, he is sometimes, as among the Maheśris, the marriage priest, and takes the bride in his arms seven times round the bridegroom; or, as among the Doms and Dharkârs, he pours water on the hands of the pair and blesses them.<sup>3</sup>

This leads to the consideration of the forms of marriage in force among these races. At the outset it may be said that any mode of connexion between the sexes which does not contravene the rules of exogamy, and is approved by the kinsfolk, ranks as a marriage with all its usual incidents and privileges. It is a later development of custom which draws any distinction between the children of a bride married as a virgin, a widow or other woman whose connexion with a man is legal under their marriage code.

In dealing, however, with their marriage-law the same difficulty meets us as in the case of their social structure. Everywhere we find merely husks of early custom which have been overlaid by conceptions borrowed from other races. Hence the original theory on which they were based is often obscure, and they may be interpreted in various ways according to the line of influence which was for the time prepotent.

Thus, to take the very primitive rite of group marriage, of this, in the first place, we seem to find a survival in the rule that all marriages more or less and in particular the less regular forms, such as widow marriage or the Levirate, that is to say, the appropriation of the wife of a dead man by his younger brother, must be carried out with the sanction of the Panchâyat or Council consisting of the adult and married males of the tribe. This seems to take us back to a time when the woman who became derelict in consequence of widowhood or desertion came again under the general control of the clansmen.

Secondly, we find indications pointing in the same direction in the rule so prevalent among these races that prenuptial incontinence, provided the lover be a member of the tribe and outside the prohibited degrees, is condoned.<sup>4</sup> Here, too, we meet as usual considerable variance of practice. Among some incontinence within the tribe is little regarded. Among others when the results of incontinence

<sup>1</sup> Crooke, *ibid.*, iv, 24; iii, 421, 481.

<sup>2</sup> Crooke, *ibid.*, i, 3, 225; ii, 7; iii, 244; iv, 65. Risley, *ibid.*, ii, 69. Crooke, *ibid.*, i, 225; ii, 77, 180, 249; iii, 421.

<sup>3</sup> Crooke, *ibid.*, iii, 408; ii, 324, 283.

<sup>4</sup> Risley, *ibid.*, i, 401 (Kândhs); ii, 83 (Mauliks); ii, 102 (Mundas); ii, 116 (Musahars); ii, 141 (Orâons); ii, 334 (Turis). Crooke, *ibid.*, i, 223 (Basors); i, 243 (Beriyas); i, 284 (Bhangis); ii, 57 (Bhoksas); iv, 388 (Thârus).

become apparent the pair are married under orders of the Council.<sup>1</sup> In other cases, again, a sacrifice of expiation is required; or this takes the form of a compulsory feast to the tribesman, which the relatives of the girl are bound to provide.<sup>2</sup> Or in other cases the paramour is fined or has to give restitution. This among the Dharkârs is so common that there is a special name, "the mother's sheet," for the cloth which under such cases the lover has to provide.<sup>3</sup> It is only among the more degraded scavenger tribes that the taboo against connexion with an outsider is relaxed. These tribes habitually recruit their numbers from abroad and treat as legitimate the children of their women when the father is drawn from a caste superior to their own.<sup>4</sup>

The custom of group-marriage has other developments which it is sometimes not easy to trace. Thus, it probably accounts for some or most of the marriage taboos which are so common in savage life. The most common of these taboos is that which prevents a man from addressing, touching, or even looking at his mother-in-law. This has been explained by Sir John Lubbock<sup>5</sup> as a survival of marriage by capture, the relatives of the bride being hostile to the man who has captured their woman; or, as by Mr. Keane,<sup>6</sup> from the analogy of the Patagonian practice that on the death of any young person the head of the family was required to despatch some aged woman, and he naturally selected his mother-in-law as the appropriate victim. Hence, it is said, through fear of such a fate, women acquired the habit of avoiding their sons-in-law.

It would be dangerous to assert that all savages have arrived at the same custom by the same route, but in the Patagonian rite it would rather seem that the specialisation of the mother-in-law was a later phase. At any rate it is hardly logical to treat the mother-in-law taboo apart from other taboos of the same class. Thus, among the Dravidians one of the most important of the marriage taboos is that which prevents a man from coming in contact in any way with the wife of his younger brother. Most of these races protect her from her senior brother-in-law by a most stringent sanction, which, in the case of the Dharkârs, reaches the point that a man contracts a stain if her shadow even crosses his path.<sup>7</sup>

Secondly, comes the taboo of the wife's elder sister. A man may marry two sisters, but he may not marry the elder if the younger be already his wife. She is said to be in the position of mother to her younger sister, but this is obviously a later development of the taboo.<sup>8</sup>

<sup>1</sup> Risley, *ibid.*, i, 91 (Bhakats); ii, 122 (Bhumij); ii, 57 (Malês); ii, 89 (Mech); ii, 243 (Savars); ii, 324 (Tipperahs). Crooke, *ibid.*, ii, 87 (Bhuiyas); ii, 412 (Ghasiyas).

<sup>2</sup> Risley, *ibid.*, ii, 57 (Malês). Crooke, *ibid.*, ii, 168 (Châis); ii, 218 (Cheros); iii, 218 (Kewats); iii, 419 (Majhwârs); iii, 419 (Mallâhs).

<sup>3</sup> Crooke, *ibid.*, ii, 87, 280.

<sup>4</sup> Crooke, *ibid.*, i, 169.

<sup>5</sup> *Origin of Civilisation*, 11 *seqq.*, 192.

<sup>6</sup> *Ethnology*, 218.

<sup>7</sup> Risley, *ibid.*, ii, 141 (Orâons). Crooke, *ibid.*, i, 220 (Bhangis); ii, 10 (Bhars); ii, 84 (Bhuiyas); ii, 97 (Bhuiyârs); ii, 139 (Biyârs); ii, 190 (Chamârs); ii, 287 (Dharkârs); ii, 339 (Doms); ii, 418 (Ghasiyas); iii, 113 (Kalwârs); iii, 252 (Kharwârs); iii, 262 (Khatks); iii, 314 (Kols); iii, 333 (Korwas); iii, 444 (Majhwârs).

<sup>8</sup> Risley, *ibid.*, ii, 141 (Orâons). Crooke, *ibid.*, ii, 97 (Bhuiyârs); ii, 139 (Biyârs); ii, 287 (Dharkârs); iii, 314 (Kols).

Thirdly, we meet with taboos of more distant female relations—the maternal aunt, the first cousin on the mother's side, the relation of Sandhi, that is, persons allied by the marriage of their children.<sup>1</sup> Among the Pankas the father-in-law and mother-in-law of a married pair do not speak to each other.<sup>2</sup> So we find taboos of the wives of the paternal uncle and nephew.<sup>3</sup> Among the Majhwârs a woman may not address her father-in-law by name.<sup>4</sup> Lastly and most significantly, the Korwas extend the taboo to their sister.<sup>5</sup>

I venture to suggest that the real explanation of this group of marriage taboos is to be found in the fact that they include persons with whom under the primitive rule of group-marriage connexion was permissible. These taboos persisted long after the social system which gave them birth had disappeared, and they had been replaced by a new series of exogamous rules and prohibited degrees.

Survivals of the same system of group-marriage may also be found in the body of custom according to which relatives on both sides aid or resist the bridegroom as he meets the bride. We have, first, the cases in which the female relatives of the bride resist the bridegroom. Thus, among the Maghs, the female relations of the bride bar the way of the bridegroom with a bamboo, across which he has to drink spirits with them; among the Ahîrs and Majhwârs the sister-in-law of the bride prevents the bridegroom from carrying her into the retiring room; among Bahelias, when he comes into the room she sits on his back and has to be fed before she will release him; among the Kândhs, after the marriage has been concluded, the bride's male relations run away with her, while the village girls recapture her and restore her to her husband; among the Dângis, the bridegroom strikes the marriage shed with a fan and the bride's female relations beat the man who carries him.<sup>6</sup> It is not easy to correlate these customs under any one general principle. Partly they may suggest capture marriage, partly compensation to the relatives of the bride for the loss of her services, or they may be in part a survival of a stage of Beena marriage in which the bridegroom became entitled to all the sisters.

Even more puzzling are the cases in which the relations of the bridegroom obstruct him. Thus, among the Bhuiyas, when the bridegroom is starting, his mother detains him and must receive a gift before she releases him; the Agariya and Biyâr bridegroom's sister bars the entrance of the bride into her husband's house and demands a present.<sup>7</sup> Among the Gadariyas there is a mimic struggle

<sup>1</sup> Risley, *ibid.*, ii, 141 (Orâons). Crooke, *ibid.*, iii, 252 (Kharwârs). Crooke, ii, 10 (Bhars); ii, 54 (Bhuiyas); ii, 139 (Bhuiyârs); ii, 287 (Dharkârs); ii, 418 (Ghasiyas); iii, 262 (Khatiks); iii, 314 (Kols); iii, 444 (Majhwârs).

<sup>2</sup> Crooke, *ibid.*, iv, 118.

<sup>3</sup> Crooke, *ibid.*, ii, 97 (Bhuiyas); ii, 190 (Chamârs); iii, 113 (Kalwârs).

<sup>4</sup> Crooke, *ibid.*, iii, 444.

<sup>5</sup> Crooke, *ibid.*, iii, 333.

<sup>6</sup> Risley, *ibid.*, ii, 31. Crooke, *ibid.*, i, 61; ii, 422; i, 108. Risley, *ibid.*, i, 402. Crooke, *ibid.*, ii, 249.

<sup>7</sup> Crooke, *ibid.*, ii, 77; i, 4; ii, 134.

between the relations of the bride and bridegroom at the home-coming.<sup>1</sup> Here we may guess a case of the transition from father-right to mother-right, or an indication of the disuse of Beena marriage, and in lieu of it, the rule of bringing the bride to the house of her husband, the same development of custom being seen in the common plan of erecting the retiring room at the house of the bride as well as that of the bridegroom. On the other hand, there are cases, as among the Kharwârs, where the bride at the home-coming refuses to dismount from her litter and enter the house of her husband until her mother-in-law gives her a present, or as among the Koiris, where the bridegroom's sister gives a fee to the bride as she dismounts.<sup>2</sup> So among the Hos if the bride be taken to her husband's house and married there, not at her own, she runs away after three days, and the bridegroom is obliged to recapture her by force.<sup>3</sup> These customs possibly point to a disuse of Beena marriage, but this series of facts is so intricate that it is hardly safe to dogmatise about them.

The line, again, between customs such as these, and survivals of actual marriage by capture cannot easily be drawn. Many incidents in the ordinary Hindu marriage rites have been explained as pointing in the same direction—such as the objection to marrying in neighbouring villages, the formal nature of the marriage procession in which only males take part, and all are mounted or armed; the arming of the bridegroom, the rule that they arrive at the bride's village late in the afternoon or by night; the mock fight at the bride's door, the refusal of entertainment at the hands of her friends, the bloody hand stamped on the shoulder of the boy's father as he goes away, the wailing of the bride as she is carried off, the taboo of the bride's village to her husband's relations after the marriage, the abusive terms applied to male relations by marriage, and so on.<sup>4</sup>

Had time permitted, it might be possible to suggest other explanations of some of these customs. Thus, the arming the bridegroom is possibly a prophylactic against evil spirits, and this also may explain cases in which the bride ceremoniously assaults her husband. Thus, among the Kanjars after marriage the pair go to a tank and the bride strikes the bridegroom with a whip of cloth specially made for the purpose; or among Dhuniyas, when the bridegroom arrives the bride strikes him two or three times on the head with a small stick.<sup>5</sup> From the analogy of parallel cases, which are many, it might be suggested that the common custom of flagellation, with the object of expelling evil spirits, may be at the root of the matter.<sup>6</sup>

There are, however, cases in which the custom of marriage by capture seems clear. Thus, at an Agariya marriage the bride hides in the house and is dragged out by the bridegroom; the Bhuiyâr girl wrestles with the youth as he applies

<sup>1</sup> Crooke, *ibid.*, ii, 362.

<sup>2</sup> Risley, *ibid.*, i, 325.

<sup>3</sup> Crooke, *ibid.*, iii, 142; ii, 298.

<sup>4</sup> Crooke, *Popular Religion and Folk-lore*, i, 99, 155.

<sup>5</sup> Crooke, *ibid.*, iii, 246, 290.

<sup>6</sup> Crooke, *ibid.*, iv, 390 *seq.*

vermilion to her hair; the Sânsya bridegroom hauls the bride seven times round the marriage pavilion and then applies vermilion to her hair.<sup>1</sup> We know that up to quite recent times the Thârus of the lower Himâlaya used to obtain their brides by capture from other tribes.<sup>2</sup>

Passing on to other modes of marriage, we find that Beena marriage, or as it is called Gharjaiyân, which means that the bridegroom lives with the family of his bride, prevails among many of these tribes.<sup>3</sup> The period of probation during which the Dravidian Jacob serves for Rachel is a year among the Ghasiyas, and among the Gonds from seven or eight months to three years or more.<sup>4</sup> Here we have a survival of the practice by which the bridegroom was adopted into the kin of the bride.

The opposite conception, by which the bride was introduced into the kin of the bridegroom, appears in many marriage rites, though here, too, there is a trace of the older rite in *confarreatio* or eating of the pair together, which is generally done at the house of the bride, the modification of custom being shown in the etiquette by which the youth refuses to eat with his wife at her house until he receives a gift.<sup>5</sup> But the more important *confarreatio* rite is carried out at the house of the bridegroom. Thus, the Majhwâr bride is not allowed to enter her new home till she and her husband eat rice boiled in milk; and to illustrate the sacramental conception of this meal, we find that the Dhobi youth does not eat boiled rice until he tastes it for the first time at his wedding feast, and the Sânsya and Majhwâr bride after her home-coming has to cook for the kinsfolk of her husband, while among the Musahars new fire is solemnly made for the cooking sacrament.<sup>6</sup> We have, I need hardly say, a survival of the same rite in the solemn cutting of the wedding cake by our brides.

This marriage sacrament, too, often takes the form of a solemn drinking rite, as of the parents of the pair who, on betrothal, solemnly drink together out of platters made of the leaves of a holy tree, or bride and bridegroom drink together, or join in drinking with the clansmen.<sup>7</sup>

More obvious still is the motive of the blood covenant. Here we can observe the stages of the degradation of custom from the use of blood drawn from the little finger of the husband which is mixed with betel and eaten by the bride among some of the Bengal tribes.<sup>8</sup> The next stage comes among the Kurmis, where the blood is mixed with lac dye.<sup>9</sup> Lastly, come the rites common to all these tribes by which the bridegroom, often in secrecy, covered by a sheet, rubs vermilion on

<sup>1</sup> Crooke, *Tribes and Castes*, i, 4; ii, 87, 91; iv, 129, 280.

<sup>2</sup> Crooke, *ibid.*, iv, 389.

<sup>3</sup> Risley, *ibid.*, ii, 202 (Rautiyas). Crooke, *ibid.*, ii, 89 (Bhuiyârs); ii, 218 (Cheros); ii, 414 (Ghasiyas); ii, 434 (Gonds); iii, 242 (Kharwârs); iii, 42 (Majhwârs); iv, 128 (Parahiyas).

<sup>4</sup> Crooke, *ibid.*, ii, 414, 434.

<sup>5</sup> Crooke, *ibid.*, iii, 245.

<sup>6</sup> Crooke, *ibid.*, iii, 419; ii, 292; iii, 426; iv, 253, 25.

<sup>7</sup> Crooke, *ibid.*, ii, 76, 290. Dalton, *Descriptive Ethnology of Bengal*, 193. Crooke, *loc. cit.*, iii, 423, 24; ii, 290.

<sup>8</sup> Risley, *ibid.*, ii, 189, 201.

<sup>9</sup> Risley, *ibid.*, i, 532.

the parting of the girl's hair and the women relations smear their toes with lac dye—all palpable degradations of the original blood rite. That the rite is sacramental is clearly shown by the fact that the widow after her husband's death solemnly washes off the red from her hair or flings the little box in which she keeps the colouring matter into running water.<sup>1</sup>

The wife is thus by the blood sacrament introduced into the sept of her husband. But a further precaution is necessary to symbolise that she throws off all connexion with her own clan. This tribal totem is often generalised by a row of clay images of parrots which are fixed on the marriage shed.<sup>2</sup> This is knocked down by the bridegroom, and the remains are scrambled for by the unmarried youths of the tribe, who by this influence hope to share in the symbol which will aid them in due time to enter the marriage state.<sup>3</sup> Or the tribal mark takes the form of conventional ornaments, known as the Toran, which are hung over the door of the bride, and these the bridegroom demolishes, sometimes using for this purpose the branch of a sacred tree.<sup>4</sup> The same rite, I venture to suggest, shows itself in the custom by which at the end of the marriage the youth's father shakes the pole of the wedding shed, which can hardly imply capture or resistance, because he is given a present for so doing.<sup>5</sup> A further development of custom is shown in the rite where five piles of rice are placed on a curry-stone and the youth grips the girl's ankle and makes her knock them down with her toe. The words denoting the pile of rice and the exogamous group are the same, and the rite seems to symbolise the fact that the bride has now solemnly abandoned her own group and entered that of her husband.<sup>6</sup>

Another series of marriage rites seems to be largely based on the desire to bring the wedded pair into intimate connexion with the reproductive powers of nature. This, in India at least, seems to be one explanation of the widespread custom of tree-marriage. One, and the most usual means of establishing communion between the worshipper and his deity is an offering, as we find it for instance in the familiar custom of dedicating the first-fruits. Hence seems to have arisen a very similar idea in the case of marriage, as we see in the numerous instances of the marriage of girls to a god as a preliminary to human marriage. In tree-marriage, then, the bride is first brought into communion with the spirit which occupies and animates the tree and by the communion shares in its fertility.

The custom of tree-marriage is familiar to the Dravidians, the tree usually selected being one regarded as sacred such as the mango, the *mahua*, the *siddh*.<sup>7</sup> In the original form of the rite the tree seems to have personified the bridegroom, as we see in the Gandhabanik ritual, where the youth climbs a tree and the bride

<sup>1</sup> Crooke, *ibid.*, ii, 135, 269.

<sup>2</sup> Crooke, *ibid.*, ii, 464; iii, 308; iv, 21.

<sup>3</sup> Crooke, *ibid.*, iv, 464; iii, 245.

<sup>4</sup> Crooke, *ibid.*, iii, 482, 486.

<sup>5</sup> Crooke, *ibid.*, iv, 22; ii, 111; i, 134; iv, 63.

Crooke, *ibid.*, ii, 284 (Dharkârs); iii, 425 (Majhwârs).

<sup>7</sup> Risley, *ibid.*, i, 293 (Gonds); i, 475 (Kharwârs); i, 531 *seq.* (Kurmîs); ii, 41 (Mahîlis); ii, 102 (Mundas); ii, 201, Rautiyas; ii, 229 (Santâls). Crooke, ii, 78 (Bhuiyas); ii, 363 (Gadariyas); iii, 374 (Lohârs); iv, 366 (Pâtars).

is carried on a stool seven times round him.<sup>1</sup> This ritual of walking round the tree in the course of the sun is common to these tribes, and then by a natural development of custom the tree becomes the centre pole of the marriage pavilion, which itself symbolises the over-spreading branches.<sup>2</sup> Later on the pole becomes a spear fixed up in the shed.<sup>3</sup> In most cases the shed is built of branches or poles of the tree held sacred by the tribe.<sup>4</sup> Its significance is clear in the case of the Dharkârs, who make the wedding fire-offering under the sacred tree. Nearly all these tribes also arrange a special booth into which at the close of the service the youth leads the bride. Thus, in the Hâbûra ritual, when the wedding is over one of the tribesmen mounts a horse and rides some distance over the plain close to the camp. The bridegroom takes the opportunity of leading the girl into the shed and consummates the marriage.<sup>5</sup>

The same desire to secure communion with the spirit of fertility embodied in the tree appears in the customs of the tree-dance, which is done on a date associated not only with the growth of the crops and with harvest, but with the seasonal period for marriage and the annual saturnalia, and in the rite of burning the Sambat or sacred tree, which is consumed to symbolise the birth of the new year and the revival of vegetative life.<sup>6</sup>

The same principle explains other marriage rites, such as that the wedded pair are seated on mats of holy leaves; that the anointing is done with wisps of the sacred Kusa grass; that the union is effected by the interchange of garlands or a flower is placed by the youth in the girl's hair.<sup>7</sup> To us it has come down in the orange blossoms and bridal bouquet.

Hence divorce, the abolition of the marriage covenant, is symbolised by the tearing of a leaf of the holy tree or of a piece of grass, or the plant itself is retained as a life token, a pledge of fidelity.<sup>8</sup> Or the tree itself is associated with birth, and as among the Mushars, the child is named from the tree under which it happens to be born, or a leaf of the holy tree is given as a remedy in cases of difficult delivery.<sup>9</sup>

It is by a natural development of ritual as the tribe advances from a rude jungle-life to a settled career dependent upon agriculture, that the kindly influences of mother earth and of the cultivated fruits of the soil are brought into communion with the pair at marriage. We see this in the institution of the Matmangara or sacred earth at marriage, which is dug with various mystic rites and often used to

<sup>1</sup> Risley, *ibid.*, i, 266.

<sup>2</sup> Crooke, *ibid.*, ii, 283 (Dharkârs); ii, 324 (Doms); ii, 344 (Dorhas); ii, 415 *seq.* (Ghasiyas).

<sup>3</sup> Crooke, *ibid.*, iii, 442 (Majhwârs).

<sup>4</sup> Risley, *ibid.*, i, 532; ii, 31, 41, 49, 69, 126. Crooke, *ibid.*, i, 4, 107, 170, 281; ii, 180.

<sup>5</sup> Crooke, *ibid.*, ii, 475 *seq.*

<sup>6</sup> Risley, *ibid.*, ii, 70, 145. Crooke, *ibid.*, ii, 83; iii, 145; ii, 137, 410.

<sup>7</sup> Risley, *ibid.*, i, 503. Crooke, *ibid.*, ii, 155, 183; iii, 422; ii, 133; iii, 244. Risley, *ibid.*, 49, 61, 97; 125, 231.

<sup>8</sup> Risley, *ibid.*, i, 533; ii, 57, 70, 116, 231, 278, 89.

<sup>9</sup> Crooke, *ibid.*, iv, 27; iii, 243.

form the fireplace on which the sacramental marriage meal is cooked.<sup>1</sup> Hence also comes the use of grain at marriage which is poured over the bride as a fertility charm. And here in India the usages of two races meet. The Ârayn sacred grain was barley, which among all the Indo-Germanic races is closely associated with sacrifice. The use of wheat is much later, and rice, which we curiously enough have adopted in our own marriage rites, probably came from the Dravidians. In some cases among these jungle tribes the pair touch the holy grain; it is poured over the bride by her brother as she revolves round the shed, or special wheaten cakes are baked which the married pair tread on, or the women throw packets of betel and handfuls of barley over the bridegroom as he enters the house, or a saucer of pulse is placed near the holy water jar and the marriage lamp.<sup>2</sup> Or again, as among the Orâons, the bride and bridegroom stand on a stone, which is not an Âryan custom, under which a sheaf of corn rests upon a plough yoke.<sup>3</sup>

The ploughshare is again frequently fixed in the centre of the wedding shed; the bride's mother waves it over her head as a charm; or the bride and bridegroom tread on the baskets used on the threshing-floor to avoid the danger of touching the threshold, the barrier which defines the domains of the kindly house spirits and the evil demons who prowl beyond it; or the winnowing fan is used to pour grain over the bride as she moves.<sup>4</sup>

From this class of beliefs we reach a possible explanation of the use of oil in marriage, birth and death rites. Oil is the essence of the tree or plant, and symbolises the life, as fat is the essence of the animal sacrifice and always invested with mystic significance. Thus, we have cases of the burning of the resin of the sacred Sâl tree as a means of expelling evil spirits.<sup>5</sup> One branch of the Nâgesar tribe uses oil in lieu of vermilion, the survival of the blood covenant.<sup>6</sup> The use of oil at marriage is common. The bridegroom and bride are anointed with a mixture of oil and turmeric, a mystic plant; at a Dom marriage the fathers of the pair sprinkle oil and turmeric on the ground and invoke the Manes to bring the marriage to a happy issue; the women who dig the sacred earth receive a dole of oil for their hair; the Nat widow at marriage has her head anointed; and among the Bhuiyârs most significantly, the bride's father presses oil with his own hand and sends it to the youth for his anointing.<sup>7</sup>

So in the death rites it symbolises the food for the dead and among the Bhuiyârs it is thrown into running water near the place of cremation; mourners after the burning put oil on their toe-rings, or pass their feet through the smoke of burning oil, or touch oil in which a flower is placed, or rub themselves with oil and turmeric—all devices to scare the ghost which may be clinging to them and

<sup>1</sup> Crooke, *Popular Religion and Folk-lore*, i, 27, 292.

<sup>2</sup> Crooke, *Tribes and Castes*, ii, 486; iii, 141, 317, 379; iv, 23.

<sup>3</sup> Risley, *ibid.*, ii, 142. Winternitz, *Trans. Folk-lore Congress*, 269.

<sup>4</sup> Crooke, *ibid.*, ii, 180; iv, 21, 63, 146; ii, 268.

<sup>5</sup> Crooke, *ibid.*, iii, 445.

<sup>6</sup> Risley, *ibid.*, ii, 122.

<sup>7</sup> Risley, *ibid.*, ii, 126, 188. Crooke, *ibid.*, i, 5; ii, 90, 324, 353; iv, 66.

avoid the death taboo.<sup>1</sup> In the birth rites an old woman smears her hand with oil and makes a mark on the wall before the cord is cut.<sup>2</sup>

By a conception akin to those which we have been considering it is easy to understand the desire to bring the married pair into communion with the indwelling spirit which in savage belief causes the springs to flow and the rivers to run. Thus we have the Greek cultus of the nymphs and the belief that rivers and springs are Kouroutrophoi, or nurturers of youth, to which the first hair of the child, a sacrifice of part of the child himself, is dedicated. Among the Dravidians the same belief shows itself in many forms—in the pouring of water over the hands of the wedded pair; in the Kalasa or sacred wedding jar placed in the pavilion, in the feet washing which implies that the bride washes of all trace of her original sept, and by tasting the water in which the feet of the bridegroom were washed becomes adopted into his clan; in the sacramental wedding bath in which the bride uses the water which served the same purpose to her lord; in the floating away in running water of the decorations used at the wedding, and many usages of the same kind.<sup>3</sup> Hence, by a natural sequence, pouring water over a woman's head is a symbol of divorce.<sup>4</sup>

The same belief shows itself in the woman after child-birth solemnly walking round the village well and smearing its platform with vermilion—again the symbol of the blood covenant.<sup>5</sup>

We thus see that while these Dravidian marriage rites embody some very primitive principles of marriage law, they also show evidence of a clear evolution of custom as the tribe emerges from the old jungle life, and they also illustrate the influence of the usages of other peoples as the forest races come into contact with a higher civilisation.

The same course of evolution is shown in the death rites to which I can now only very briefly direct your attention. The line of cleavage is generally taken to lie between burial and cremation, the former prevailing among people some of whom merely wish to put their dead out of sight, others desire to retain their spirits with them; the other adopted by those who believe that the spirit etherealised and released by fire is thus enabled to rejoin the sacred dead in a special heaven of their own. But this generalisation, attractive though it may seem, hardly covers the whole ground. The value of the evidence from the Dravidian people in this chapter of ritual is that we find among them a distinct evolution of custom through all its successive stages. Some expose the dead, others expose certain persons only; some bury; others are in the transition stage between burial and cremation; others, again, practise water burial or combine it with cremation.

<sup>1</sup> Crooke, *ibid.*, ii, 93, 284, 325, 417; iii, 433.

<sup>2</sup> Crooke, *ibid.*, iii, 198.

<sup>3</sup> Crooke, *ibid.*, ii, 92; iii, 483; iv, 21. Risley, *ibid.*, ii, 88, 282. Crooke, *ibid.*, i, 128, 235, 251; iii, 260; i, 62; ii, 78 *seq.*; 416; iii, 246, 260; iii, 425; iv, 116.

<sup>4</sup> Risley, *ibid.*, i, 533; ii, 57.

<sup>5</sup> Crooke, *ibid.*, i, 107; 170; ii, 363, 476; iv, 145.

But here it is necessary to distinguish. It is, I believe, the general rule that children, among whom are included unmarried persons and those who have received no further rite of initiation, are buried, not cremated.<sup>1</sup> Such persons are regarded as lying under a taboo; for until a child is solemnly introduced into the tribe by the rites of hair shaving or ear piercing, both forms of sacramental sacrifice, he is regarded as a Bhût or devil, and not subject to the tribal restrictions connected with food and so on. The same rule applies to those who perish through infectious disease, snake bite or leprosy.<sup>2</sup>

Combined with this taboo and very closely connected with it is the rule under which priests, ascetics, spirit mediums, elders or men of eminence, are, as a rule, interred, not cremated. Such persons, if their bodies be preserved, are likely to transmit to their survivors in whose neighbourhood they lie their mystic powers, piety, and other virtues. Thus, among the Maghs, the bodies of priests and persons of high social position are dried, embalmed, and kept for a year, after which they are solemnly cremated.<sup>3</sup> The Thârus bury their eminent dead in the house, as the Vaishnava ascetics do.<sup>4</sup> The Bishnois bury in the family cow-pen.<sup>5</sup> Among the Kanjars the spirit medium of their tribal god Mâna is always buried.<sup>6</sup> The Gusâins, a sect of Saivite ascetics, are buried, and the grave is filled with salt.<sup>7</sup> But these rules are constantly subject to modification. Thus, the method of disposing of the dead among the Gonds has changed in quite modern times; their elders are cremated, and their women, who, as is common among many savages, are conceived as subject to taboo, are buried. The old custom of house burial has recently been superseded by the use of a tribal cemetery.<sup>8</sup>

One of the earliest forms of disposal of the dead shows itself in the case of the Musahars and many of the lower jungle races, who simply fling the corpse away in the forest or do so after only the most hasty and incomplete cremation.<sup>9</sup> The Mâlês of Bengal expose in the jungle those who perish of snake-bite or other violent death, the belief being that such persons are taboo and their ghosts likely to prove malignant, in which case it is usually deemed expedient for the survivors to abandon the neighbourhood, permanently or for a time.<sup>10</sup>

It is a further development of the same idea which causes some of these tribes to dispose immediately of the corpses of those who die in a state of taboo and to perform their obsequies after a certain time when the taboo is supposed to be removed. Thus, among the Kaseras those who die a violent death are at once thrown into water, and cremated in effigy six months after death.<sup>11</sup> So with the Audhiyas, who fling into water the bodies of those who die by drowning or other

<sup>1</sup> Risley, *ibid.*, i, 94, 231, 499, 535. Crooke, *ibid.*, i, 7.

<sup>2</sup> Risley, *ibid.*, i, 510, 499; ii, 206. Crooke, *ibid.*, i, 7.

<sup>3</sup> Risley, *ibid.*, ii, 34.

<sup>4</sup> Risley, *ibid.*, ii, 318, 342. Crooke, *ibid.*, iv, 394.

<sup>5</sup> Crooke, *ibid.*, ii, 124.

<sup>6</sup> Crooke, *ibid.*, ii, 469.

<sup>7</sup> Crooke, *ibid.*, iv, 28.

<sup>8</sup> Crooke, *ibid.*, iii, 170.

<sup>9</sup> Crooke, *ibid.*, iii, 143.

<sup>10</sup> Crooke, *ibid.*, ii, 435.

<sup>11</sup> Risley, *ibid.*, ii, 59.

accident, poison, cholera, small-pox or leprosy, and within a year cremate them in effigy, a rule which also prevails among the Barhais.<sup>1</sup>

But in most cases we find these people in a stage of transition between burial, disposal in running water or cremation. Thus, among the pure jungle-races those who are more advanced cremate; those less exposed to Hindu influence bury.<sup>2</sup>

Others, again, perform a very imperfect cremation and then bury, as the Bhangis do, who before burial scorch the face or hand, or like the Kanjars, who scorch the left thumb and then bury.<sup>3</sup> There is some evidence that a mixture of rites like these prevailed among the early European barrow-builders, and some form of embalmment combined with cremation seems to have been the rule at Mycenæ; but the best authorities appear to agree that if the early Greeks adopted cremation it was done only in a very imperfect way.<sup>4</sup>

We also find among some of the Dravidian races the custom of disposing of the corpse in running water, which does not seem to be an Âryan rite, and its appearance among the Gusâin ascetics seems to point to their adoption of some indigenous practices.<sup>5</sup> Others, again, like the Musahars,<sup>6</sup> combine cremation with disposal by water, and this has been adopted by modern orthodox Hindus, who collect the bones at the pyre and subsequently fling them into some holy stream.

Lastly, we have cases in which all three modes of disposing of the corpse are adopted. Thus, among the Aheriyas the richer people cremate, the poorer bury or fling the corpse into water; Doms cremate, or bury, or scorch the corpse and throw it into water; the Hâbûras cremate, or bury, or fling into water or expose in the jungle.<sup>7</sup> Even among orthodox Hindus the three methods are adopted; babies they bury; from babyhood till marriage or initiation they use water burial; adults they cremate. We may therefore conclude that various converging strains of influence have combined to establish the current forms of death rites.

One very common method of guarding against the evil influences of persons in a state of taboo is to bury the dead face downwards, to fill the grave with thorns, to pile a heavy cairn over the remains.<sup>8</sup> With all Dravidians the order of burial is to lay the head to the north and the feet towards the south, the land of the dead, a belief which may have been borrowed from them by the Hindus. Even a more primitive rule is found among the Kabirpanthi Rautiyas of Bengal, who bury the dead standing, of which there are instances in European tradition, as in

<sup>1</sup> Crooke, *ibid.*, i, 90, 194.

<sup>2</sup> Crooke, *ibid.*, ii, 284 (Dharkârs); iii, 332 (Korwas); iii, 433 (Majhwârs); *Central Provinces Gazetteer*, 49 (Korkus). Crooke, *ibid.*, iv, 393 (Thârus). Risley, *ibid.*, i, 62 (Banwârs); *ibid.*, i, 81 (Bauris); *ibid.*, i, 136 (Binjhiyas); *ibid.*, i, 299 (Goriyas), *ibid.*, i, 510 (Koras); *ibid.*, ii, 244 (Savars). Crooke, *ibid.*, i, 286 (Bhangis).

<sup>3</sup> Crooke, *ibid.*, i, 286; iii, 144.

<sup>4</sup> Schuchhardt, *Excavations*, 162 *seq.*; 296, 325 *seq.*

<sup>5</sup> Crooke, *ibid.*, iv, 28 *seq.*; ii, 471.

<sup>6</sup> Crooke, *ibid.*, iv, 29.

<sup>7</sup> Crooke, *ibid.*, i, 44; ii, 325, 476.

<sup>8</sup> Risley, *ibid.*, i, 81, 231, 248, 510. Crooke, *ibid.*, i, 44; iv, 66.

the well-known case of Rare Ben Jonson.<sup>1</sup> We find, again, among the Sannyâsi ascetics a survival of the practice common among other savages of burying the dead in a cramped sitting position, which symbolises the posture of the child in the womb of its mother.

I have, thus, at a length which may, I fear, be considered excessive, endeavoured to bring before you some considerations which may attract your interest to a race which possesses no historical annals, and which has secured little attention from Englishmen. But particularly from an administrative point of view, they are a people of no little importance. Not only does the Queen-Empress rule sixteen millions of pure Dravidians, a population as large as that of Spain, but Southern India has been in the main peopled by them, and, as I have attempted to show, they form a large element in the population of the northern part of the Peninsula, in many respects the most valuable and interesting part of the Empire. It is on the development of this race that our tenure of India mainly depends. Englishmen in India will always continue to form a garrison pledged to maintain the peace, and a small body of administrators whose task it is to develop the resources and train the native races to take their place in the government of the country. But the Englishman cannot live and multiply among the rigorous surroundings of a tropical climate. It is a remarkable but melancholy fact that there is not, I believe, a single lineal descendant in the third generation of the original settlers alive at the present day. The progress of agriculture, which must always remain the leading Indian industry, mainly depends on the Dravidian race.

Hence the study of this people is obviously one of great importance. And in closing, I may venture to suggest that this Institute might be well advised to suggest to the Indian Government a more extensive ethnological and anthropometrical survey of them than has been hitherto attempted. We need one general survey extending through the Peninsula from the shores of the Indian Ocean to those of the Bay of Bengal, and linking together in one well organised scheme, the Bhîl of the West with the Gonds of the Central Provinces, and the Kol, Kharwâr, and Santâl of the eastern portion of the plateau. If I have succeeded in showing that the ethnologist and student of primitive sociology has something to learn from an investigation of these races, my aim in writing this paper will have been fully attained.

<sup>1</sup> Risley, *ibid.*, ii, 205. Crooke, *ibid.*, iv, 275; Wheatley-Cunningham, *London Past and Present*, iii, 473.

## ORDINARY MEETING.

DECEMBER 6TH, 1898.

F. W. RUDLER, Esq., F.G.S., *President, in the Chair.*

The Minutes of the last Meeting were read and signed.

The PRESIDENT announced that C. J. TABOR, Esq., had been elected a Fellow of the Institute.

The PRESIDENT introduced the Rev. H. N. HUTCHINSON, who exhibited and explained his collection of ethnological photographs and read a paper on the subject.

The PRESIDENT thanked Mr. Hutchinson, and exhibited a photograph of an aged Kaffir chief, that had been presented to the Institute by Miss Buckland.

He then called upon Professor RUPERT JONES to read two papers, one by George Leith, Esq., of Pretoria, "On the Caves, Shell Mounds, and Stone Implements of South Africa," and the other by M. E. Frames, Esq., "On worked flints from Griqualand-East."

Discussion on these two papers was carried on by the PRESIDENT, Mr. NICOL BROWN, Mr. W. Y. CAMPBELL, Mr. FRANK SHRUBSALL, Mr. JOHN BALLOT, Rev. ASHINGTON BULLEN, Mr. A. L. LEWIS, Mr. G. M. ATKINSON, Dr. WOODWARD, and others.

A vote of thanks was passed to Mr. Leith and Mr. Frames for their papers, and to Professor Jones for reading them, and also for exhibiting a collection of flint implements in illustration of the communications.

# SUGGESTIONS FOR FORMING A COLLECTION OF PHOTOGRAPHS FOR THE ANTHROPOLOGICAL INSTITUTE.

BY REV. H. N. HUTCHINSON, B.A., F.G.S.

IN this communication Mr. Hutchinson pointed out the exceptional opportunities for collecting photographs, which were enjoyed by our anthropologists in consequence of the vast extent of the British Empire, and expressed his regret that we do not possess a collection in any respect worthy of the country. Such a collection as he desired to form would be useful not only to students of anthropology and ethnology, but also to many artists, authors, and publishers of illustrated works who might desire from time to time to consult photographs of human types, dress, weapons, etc.

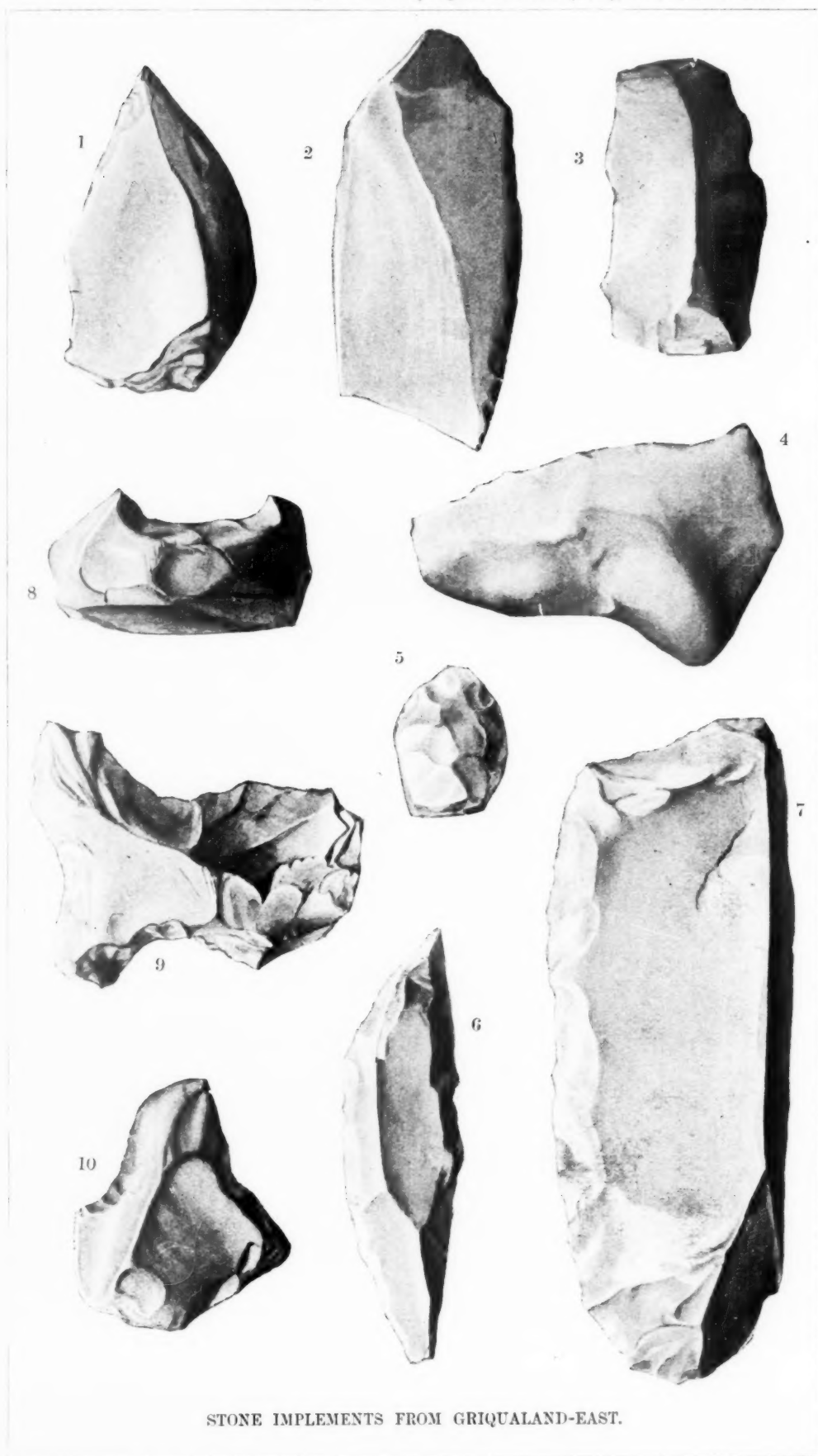
In order to obtain the photographs, he advised that circulars should be sent to professional photographers, offering to purchase suitable subjects, and to the photographic societies all over the world, soliciting their co-operation. The collections at Oxford and Cambridge and at the principal missionary societies, as well as those in private hands, should be examined, and a selection made. It would also be desirable to send an agent to visit the principal ethnographical museums on the continent, with the view of securing illustrations.

All the photographs should be mounted on boards of uniform size, and as much information as possible given in type-written slips pasted on the mount. The photographs with other anthropological illustrations, such as lithographs and half-tone process-prints, should be classified according to race and country, and the whole series arranged in drawers or boxes. Each illustration should, of course, be numbered and registered in a catalogue of the collection.

Mr. Hutchinson had recently been engaged in forming a collection of anthropological photographs to illustrate a popular work on ethnology which he hopes to publish soon; and for this purpose he had visited Paris, Leyden, Hamburg, Berlin, Dresden, and Leipzig. But the collection for the Institute ought to be on a very much larger scale, and would entail a considerable outlay. He therefore urged that a strenuous effort should be made to raise a fund of £500 for the purpose of forming such a collection as should be thoroughly typical and worthy of the Institute.

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STONE IMPLEMENTS FROM GRIQUALAND-EAST.

ON SOME STONE IMPLEMENTS FOUND IN A CAVE IN  
GRIQUALAND-EAST, CAPE COLONY.

BY MINETT E. FRAMES, Esq., Johannesburg. (Communicated by PROFESSOR  
T. RUPERT JONES, F.R.S., Hon. Memb. Anthropol. Inst.)

[WITH PLATE XVI.]

[The author prefaces his description of the cave with remarks on stone implements in general. With regard to those of South Africa, he regrets he has met with very little descriptive literature, Mr. E. J. Dunn's memoir in the *Trans. Philosoph. Soc. of South Africa* being the only account of them known to him.]

THE cave to which I wish to draw attention occurs on a farm named "Curragh," on one of the spurs of the Drakensberg, and close to the Umdowaan River, the boundary-line between Natal and Griqualand-East. This cave, or rather rock-shelter, has been formed by the weathering away of a sandstone-and-shale-breccia, leaving an overhanging ledge and a floor of hard sandstone. These shale-breccias invariably weather away first, especially when the shale is abundant in the rock. When one of these hollow shelters is found with water in the immediate vicinity, it is sure to show signs of having been inhabited at one time or another. Over the ledge-roof of the Curragh Cave, a stream of water falls clear of the floor and partly obscures the entrance. The dwellers in these caves probably inhabited only those that had water close at hand, as they do not appear to have had vessels to carry it in, and possibly they had to stand an occasional siege by an enemy.

This cave was twice inhabited. The record of the last dwellers is easily deciphered. They built three semi-circular walls across the entrance to add to the comfort of the abode; and these walls have been ornamented with a somewhat artistic design, picked out with clays of various colours in broad and narrow bands. The style of ornamentation and the type of architecture are distinctly characteristic of the Basuto nation. The inhabitants of the district informed me that Basutos did live in this particular cave, and that before them it was inhabited by Bushmen. The Basuto family, on taking possession of the cave, swept it out, and threw the rubbish right in front of the cave under the miniature waterfall, where I found it still lying in an undisturbed heap.

Some paintings on the wall of the cave are evidently the work of the Bushmen, with whom the eland was a favourite subject of their art. These appear to be ancient, and, though in sheltered parts of the cave, have a worn aspect. There are

eight representations of the eland, and one crude painting of an elephant. Two shades of red were used—one, a dark colour, seems to have been used for the back and sides of the eland; the lighter for the belly, legs, neck, and head. The Basuto, who had taken possession, endeavoured to portray an eland from a Basuto point of view, the result being a nondescript kind of animal—anything between a greyhound and a giraffe.

The roof of the cave is blackened with smoke, the fire having been made inside; but it is probable that in the summer months the fire was made outside. The immediate vicinity, however, is overgrown by grass and shrubs, so that in the limited time at my disposal I was unable to find the spot where the ashes and the kitchen-midden stuff were thrown.

Amongst the rubbish that had been swept out of the cave, the stone implements now exhibited were found, together with various fragments of rocks. Some of these showed that they had been chipped, and more than 75 per cent. were foreign to the neighbourhood. The majority of the implements and associated fragments were what I take to be black cherts and lydianized shale, with a small percentage of a dense, fine-grained basaltic rock, and a peculiar grey rock used for some implements. Amidst the heap small flakes of quartz and jasper were also found, but have been lost since. Some of these, I think, are arrow-tips, such as are alluded to by Mr. E. J. Dunn (*Trans. Philosoph. Soc. of South Africa*, vol. ii, 1880, p. 15).

It is probable that some of the implements forwarded with these notes represent types used only in the cave-house by the women in dressing skins and manufacturing spear and arrow-shafts, and also in working into shape the digging-sticks and others, such as knob-kerries, whether of wood or rhinoceros horn.

Another shelter, called the "Bristol Cave," lies about four miles north of the Curragh Cave, and these are forty miles N.W. of the town of Kokstadt, in Griqualand-East; both lie at the foot of the Drakensberg. In the Bristol Cave only a few implements were found, and they could be matched with specimens from the Curragh locality. At this latter place the heap of rubbish was only partly examined, for my time was limited, and the water fell on my back very unpleasantly on that cold winter's day. But my friend, Mr. F. R. MacDonald, who has become a keen hunter of these implements, and has promised to carefully search the heap and locality, will forward to me, from time to time, the results of his labours.

We found very many fragments of implements, broken probably in use, but, of course, selected only those that were less damaged. I expect that it will be noticed that some have been twice chipped. The last chipping is apparently of recent date, judging from the freshness of the chipped faces. I do not think that the recent workmanship was due to the Basutos, because these particular specimens were found in the undisturbed heap of old sweepings, and in some instances at the bottom of that heap. It is possible that the earlier occupiers of the cave got some of their implements whilst foraging among the haunts of their enemies, or stole

them from friends elsewhere, and then chipped them in the manner considered best suited for some special object.

Some of the specimens look water-worn, as if taken from the bed of a river; but the smoothing may have been due to long-continued use.

Some of the rounder pebbles had been used as mullers, for grinding roots and herbs, and probably locusts; they showed signs of usage by one or more faces having been worn down. There were also smooth pebbles, flat on one side and rounded on the other, used probably for throwing at birds and small game. This shape is very well adapted for such purpose, and we know that the Bushman was very expert at stone-throwing; so that he probably carried a supply of these when in the field, and kept a reserve for cases of emergency in his cave-home.

The diminutive size of the implements herewith forwarded supports the view that they belonged to the pigmy Bushman, and, from the evidence before us, it is certain that they neither belonged to, nor were used by, the Basutos.

NOTES BY PROFESSOR T. RUPERT JONES ON THE SPECIMENS EXHIBITED BY  
MR. MINETT E. FRAMES.

Having been asked by Mr. Frames to prepare his paper for presentation to the Institute, and to make a critical examination of the stone implements forwarded with it, I here append my notes on these specimens, in the order in which they can be conveniently arranged according to their shapes. The numbers on Mr. Frames's labels are preserved (1-30).

All are made of ordinary flakes (except two, not accepted as tools), and are dressed by chipping on one face only. The specimens consist of a black metamorphic siliceous rock (lydite), except Nos. 22-25 (chalcedony), and Nos. 1, 10, 26, which are of a drab-coloured siliceous rock weathering brown.

Nos. 19 and 20. Triangular ridge-flakes. Compare Figs. 9 and 7, in E. J. Dunn's Plates 1 and 2, *Trans. Phil. Soc. S. Africa*, vol. ii (1880), pp. 14 and 15. [Fig. 1, No. 20.] The edges once sharp have been smoothed by long usage.

No. 16. Thin flat flake of a grey and mottled siliceous shale, with a portion of the old, weathered, brown surface of the original stone. The curved edge has been trimmed to sharpness by chipping, as "a serviceable knife" (Mr. Frames). [Fig. 2, No. 16.] Knife-like implements, the author considers to be abundant over widely separate areas in South Africa, but he thinks that the majority of the implements from the Curragh Cave have not been previously noticed.

Nos. 21, 7, 27, 24, 22. Portions of ridge-flakes; blunt at both ends.

21. Compare Dunn's Fig. 5, p. 13. Scraper. Edges and ridge somewhat smoothed. [Fig. 3, No. 21.]

7. Compare Dunn's Fig. 1. Much smoothed by handling and wear all over the ridges, edges, and surface.

27. Compare Dunn's Fig. 5. One end roughly chipped to a semicircle. Brown chalcedony.
24. Compare Dunn's Fig. 5. Chalcedony, grey and brownish. One end has had its edge crushed.
22. Compare Dunn's Fig. 5. Impure chalcedony, with some old weathering on the thick edge. Dressed or used on one edge.
- Nos. 25 and 23. Short pieces of flakes, dressed by chipping on the convex face.
25. Dull white chalcedony. Thick and suboblong.
23. Dull grey chalcedony (like flint). Thick suboval. Used on the curved edge and on the blunt end. [Fig. 5, No. 33.]
- No. 12. Probably a small "waster." Smoothed however on the edges.
- Nos. 13, 14, 15. Rather large flakes, rounded at one end, and chisel-shaped at the other.
13. Chipped at the rounded end, along one side, and into an ogee, gouge-like curve at the other end. A large patch of thick, old, brown weathering is present on one face.
14. Long-oblong, rounded at one end; chipped along one edge, and across the other end obliquely. [Fig. 7, No. 14.]
15. Roughly shaped; subacute at the bulb-end, nearly straight on the two edges, and coarsely chipped to a blunt straight edge at the other end. A portion of the old, thick, brown weathering (like "mountain-cork") remains on one face.
- No. 17. Somewhat elegant in outline, nearly fusiform, or rather fish-like; dressed carefully to a narrow not quite symmetrical shape, sharp at the ends, and convex on one face. Compare Dunn's Fig. 10, which is much better finished and more rhombic in shape. [Fig. 6, No. 17.]
- No. 28. A suboval, concavo-convex stone, somewhat like a thick hollow, subacute spoon, of granular felspathic (not calcareous, nor siliceous) kind of rock. Probably part of an outer coating of some weathered nodule.
- Nos. 8, 30, 11, 1, 2, 3, 5, 29, 6, 4, 9, 10, 26. Draw-shaves, side-scrapers, or stick-shaves. Pieces of irregular flakes, more or less hollowed on one, two, or three of the thin edges by chipping and by use into semicircular notches, probably for sharpening the points of weapons of wood and bone; and for shaping and smoothing shafts for spears and arrows, and sticks for bows, and for digging, fighting, etc. In some cases, the elongate shape (as Nos. 1, 2, 3) allows of the supposition (Mr. Frames suggests) that the implement may have been held by the first finger and thumb in skinning an animal, and subsequently for removing the fatty material from the skin, preparatory to dressing it. In the further preparation by rubbing and smoothing the skin some of the other implements have received the smoothly-worn aspect that their edges present.
- Nos. 8 and 30 are comparable with Dunn's Fig. 3, p. 13. The smoothings of the *old weathered portion* may have been due to ancient water-action

in No. 1, as an old river-stone; so also Nos. 26 and 10. Some of this group are quite analogous to specimens from the plateau-gravel of Kent, collected by Mr. B. Harrison, of Ightham.<sup>1</sup>

In the *Journ. Anthropol. Inst.*, vol. xi (1881), in Plate XXX, Figs. 6A and B, are shown two faces of a flint-tool, of an analogous type, for scraping and shaping sticks. This specimen General Pitt-Rivers picked up at Gebel Laha-Mare, in Egypt, and describes as a "Hollow scraper for planing round surfaces." Many specimens of such hollow-edged and crescentic flint implements ("*croissants concaves*") from the gravel of the Seine in the Paris basin, and others from the Vallée du Grand Morin, are figured in Plates 3, 4, 13 and 14 of M. A. Thieullen's memoir entitled *Les véritables instruments usuels de l'âge de la pierre*. 4to. Paris, 1897.

8. Side-scraper. Rough flake, sub-oblong, broadly and deeply hollowed by rough chipping on one edge. Ends approximately equal. Edges partially smoothed. (A small analogue is published by Capt. Hutton, in the *Trans. New Zealand Institute*, vol. xxx (1897), Plate XIII, Fig. 3.)

30. Side-scraper; though smaller, characteristically analogous to No. 8. [Fig. 8, No. 30.]

Nos. 11, 1, 2, 3. Side-scraper, elongate forms with hollowed edges. Some, smoothed by wear and handling.

11. Small, thin, curved flake, chipped with some care.

1. This has two broad, and one small, crescent hollows. Drab-grey siliceous rock, with much of the old, smooth, thin, brown weathering remaining on the ridge-face.

2. Thick, narrow, elongate (axe-like) specimen, deeply and broadly hollowed on two edges. Thin and wide at one end; truncated at the other; partially smoothed.

3. Somewhat fiddle-shaped; strongly hollowed on one edge. Smoothed all over.

Alluding to Nos. 1, 2, and 3, Mr. Frames particularly states: "With regard to the use of stones in skinning, I myself saw a Griqua, in Griqualand-East, though possessed of an excellent knife, use a stone. This he did by grasping the skin in his left hand, and with his right hand he vigorously inserted the stone between the flesh and the skin, and removed the latter at a rapid rate."

No. 5. Side-scraper sub-triangular; the straight edge has been dressed on the flat face; the other edge has been hollowed out towards the broader end on the ridge-face. All the surface and edges are very much smoothed, probably worn down by use [Fig. 4, No. 5]. An analogue from Shetland (?) is figured on

<sup>1</sup> *Quart. Journ. Geol. Soc.*, vol. xlv (1889), pp. 270 *et seq.*, Plate XI; and *Journ. Anthropol. Inst.*, vol. xxi (1892), pp. 246-276, Plate XX. See also Sir Joseph Prestwich's memoir on the "Primitive Characters of the Flint Implements of the Chalk Plateau," *Collected Papers*, etc., 1895, pp. 49, etc., Plates I-XII.

page 9 of the *Catal. Nat. Mus. Antiq. Scotland*, 1892. In the *Journ. Anthropol. Inst.*, vol. xi (1882), Mr. W. D. Gooch, described some South-African flakes with rounded notches worked in them. One such "Notched scraper, for trimming and rounding arrow-shafts," is described in his exact and comprehensive paper (pp. 124-183), on the Neolithic age, etc., in South Africa, and is figured in Plate XIII, Figs. 1 and 2.

Regarding what are here termed side-scrapers and stick-shaves or draw-shaves, Mr. Frames remarks that "a portion of the edge, chipped or worn out in a more or less semicircular hollow, is characteristic; and this hollow was intended for some special purpose, especially as the edge is often much worn. No. 5 may have been used as a knife at first, but the edge and surface have been further worn down by wear and use as a rubber or polisher, perhaps of sticks, or of soft material, as in dressing skin."

Nos. 29, 6, 4. Side-scrapers, stick-shaves or draw-shaves, pieces of flakes, much and roughly dressed. These have three crescentic hollows on the edges, like many of the well known plateau-flints of Kent.

29. Side-scraper. A piece of a flake of a drab siliceous rock, retaining some of its old, brown, smooth weathering on the surface. Dressed to a roughly polygonal outline, three sides of which form a broad blunt projection. [Fig. 9, No. 29.]

6. A somewhat similar polygonal implement with three boldly curved notches.

4. Irregularly sub-quadrate, with three broad notches.

No. 26. Sub-triangular piece of flake of a drab-coloured siliceous rock; with portions of the old, smooth, brown weathered surface. It has been chipped on three edges into a triangular projection somewhat like a broad blunt rimer, or three-sided scraper.

Nos. 9, 10. Shoulder-scrapers or stick-shaves. Parts of flakes dressed and worn away so as to have two semicircular hollows, symmetrically placed and parallel with a projection between them, like a coarse blunt rimer. Both are much smoothed by use and wear. Quite analogous to many plateau implements of Kent.

9. Triangular, with two broad sub-parallel notches and a sharp projection between them. Of the usual black, siliceous, metamorphosed shale (lydite). [Fig. 10, No. 9.]

10. Polygonal, with the two broad notches by side of the projection. Piece of a rough flake of greyish-drab siliceous rock, retaining some of an old, smooth, brown weathering, and elsewhere embrowned by a later weathering, except at a recent fracture.

No. 29. A small tadpole-like piece of weathered or water-worn sandstone, not at all likely to have been an implement.

Mr. Frames also found in the Curragh district two of the large round perforated stones, used as make-weights on "digging-sticks," but they were broken. Such implements are rather plentiful in some parts of South Africa, and have been well described by Mr. E. J. Dunn, in the *Trans. Phil. Soc. South Africa*, vol. ii, (1880), pp. 20-22, Plate 4, Figs. 25, 29, 30. See also Dr. Dale's paper in the *Cape Monthly Magazine*, October, 1870. In the *Journ. Anthropol. Inst.*, vol. xi (1881), p. 129, Mr. W. D. Gooch also alluded to these round implements, or "digging-stick weights" as having probably been originally intended for "club-heads."

#### Explanation of Plate XVI.

##### Stone Implements from a Bushman Cave in the Curragh Farm, Griqualand-East.

Fig. 1.	No. 20 of Mr. Frames's collection.	Triangular ridge-flake.
" 2.	" 16 " " "	Flat flake, dressed on one edge.
" 3.	" 21 " " "	Oblong piece of ridge-flake.
" 4.	" 5 " " "	Triangular ridge-flake, notched on one edge, and worn smooth all over.
" 5.	" 23 " " "	Piece of thick chalcedony flake, dressed on one face.
" 6.	" 17 " " "	Flake dressed on one face and the edges to a sharp point at each end.
" 7.	" 14 " " "	Oblong flake, dressed at one end and on the edge.
" 8.	" 30 " " "	Piece of flake, hollowed on one edge.
" 9.	" 29 " " "	Irregular piece of flake, hollowed on three of its thin edges.
" 10.	" 9 " " "	Triangular piece of flake, hollowed on two of its thin edges, leaving a blunt point.

ON THE CAVES, SHELL-MOUNDS AND STONE IMPLEMENTS OF  
SOUTH AFRICA.

By GEORGE LEITH, Esq., of Pretoria. (Communicated by Professor T. RUPERT  
JONES, F.R.S., Hon. Memb. Anthropol. Inst., etc.)

[WITH PLATES XVII AND XVIII.]

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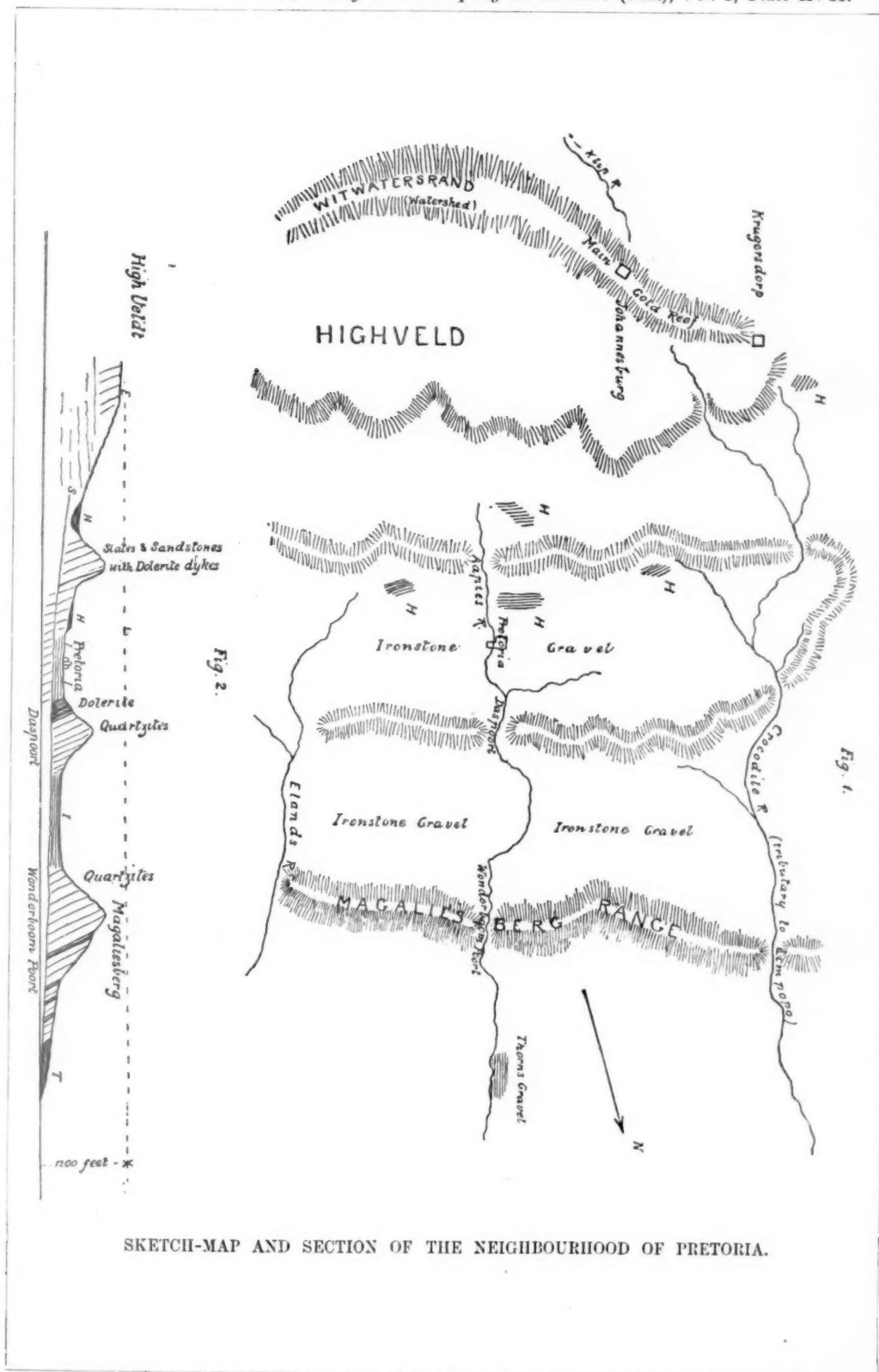
CONTENTS.

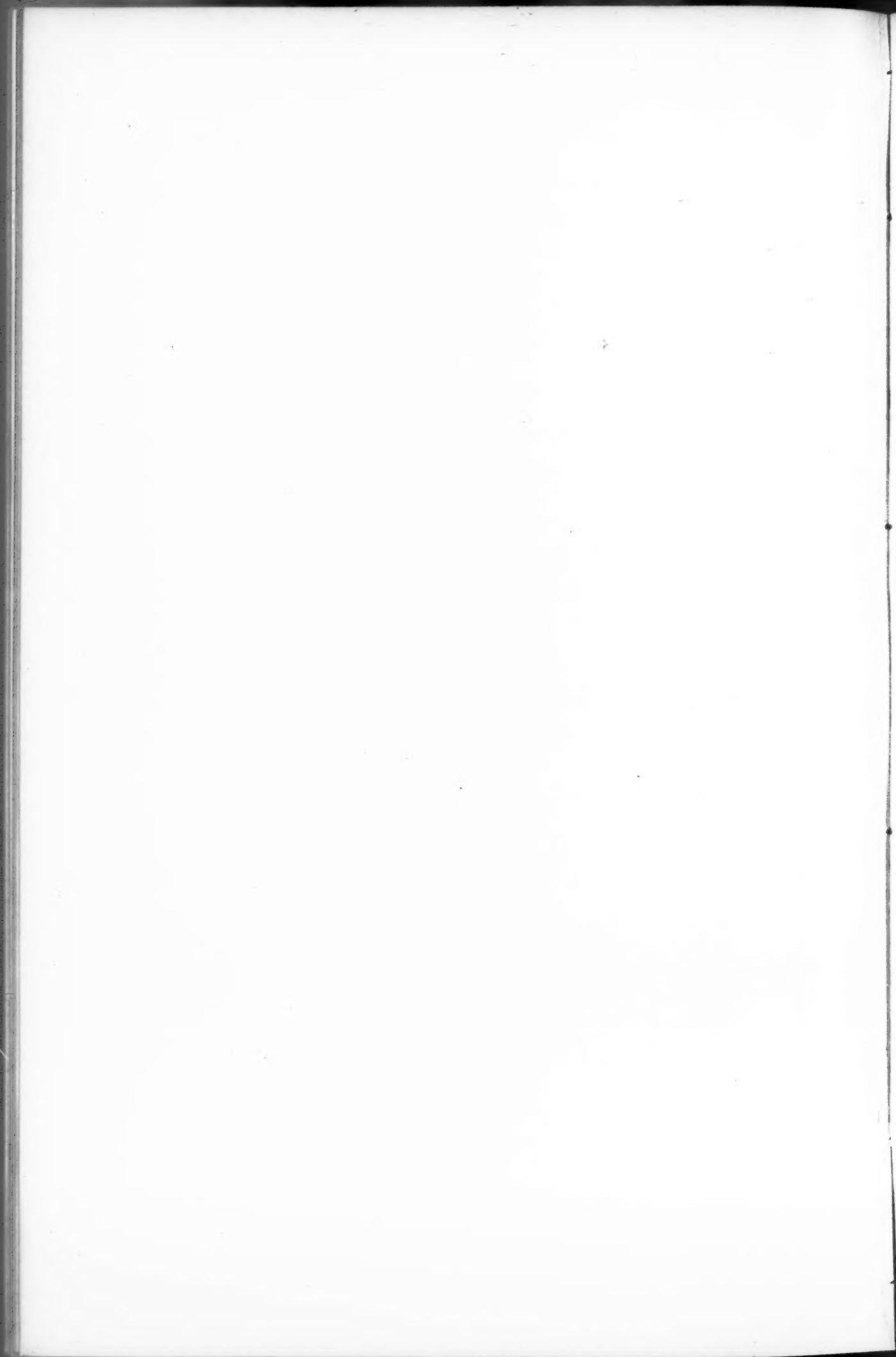
- § I. Caves and their Contents in the Stormberg near Burghersdorp, Cape Colony, p. 258.
- § II. Caves at Mossel Bay. 1. Cape St. Blaize, p. 260. 2. Bland's Cave, p. 262. 3. Rock-shelter, p. 263.
- § III. East London: Bats' Cave, p. 264; and massive relic of an old Cave-floor, p. 264.
- § IV. Shell-mounds or Kitchen-Middens on the South Coast, p. 265.
- § V. Large stone implements near Cape St. Blaize, p. 266.
- § VI. Stone implements in the Transvaal. 1. The gravel near Pretoria, p. 267. 2. The brick-earth, p. 267. 3. The higher gravels, p. 268. 4. On the Aapies River, below Pretoria, p. 270.
- § VII. Special implements: mullers, pounding, hammering, and digging stones, sharp-edged ring-stones, rimers, chipped ballstones, and axes, p. 271.

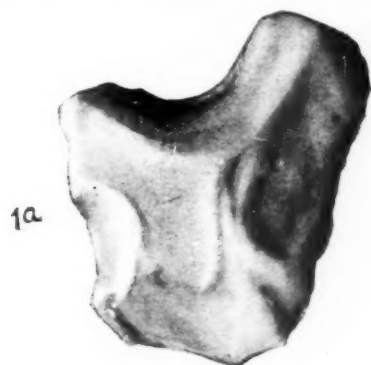
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§ I. *Caves in the Stormberg.*

IN the beginning of 1886 I had the good fortune at Burghersdorp—a village on the northern slope of the Stormberg in Cape Colony—to make the acquaintance of Dr. Daniel Kannemeyer, whose contributions to palæontology have been neither few nor small. In one of his very few leisure hours he took me to the base of a "Krantz" or precipitous rock, hemming in the village on one side. He showed me at several spots the defaced remains of Bushmen paintings on the overhanging quartzite rocks, and showed me also, in the talus of refuse in front of these recesses, the handiwork of their former occupants. These were chiefly flake implements of the well-known scraper type, made of a highly indurated black shale, and showing on one side in every case the bulb of percussion, which archaeologists have come to regard as the "trade-mark" of primitive humanity. The subject had a great attraction for me, and in subsequent visits with the doctor to cave-shelters in the Stormberg Mountains, remote from the present haunts of men, we came







1a



1b



2a



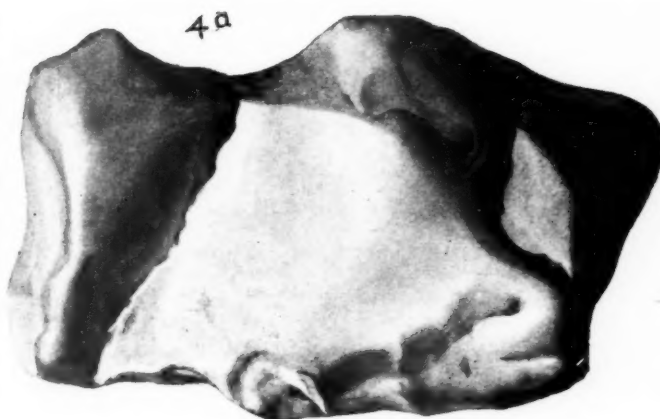
2b



3a



3b

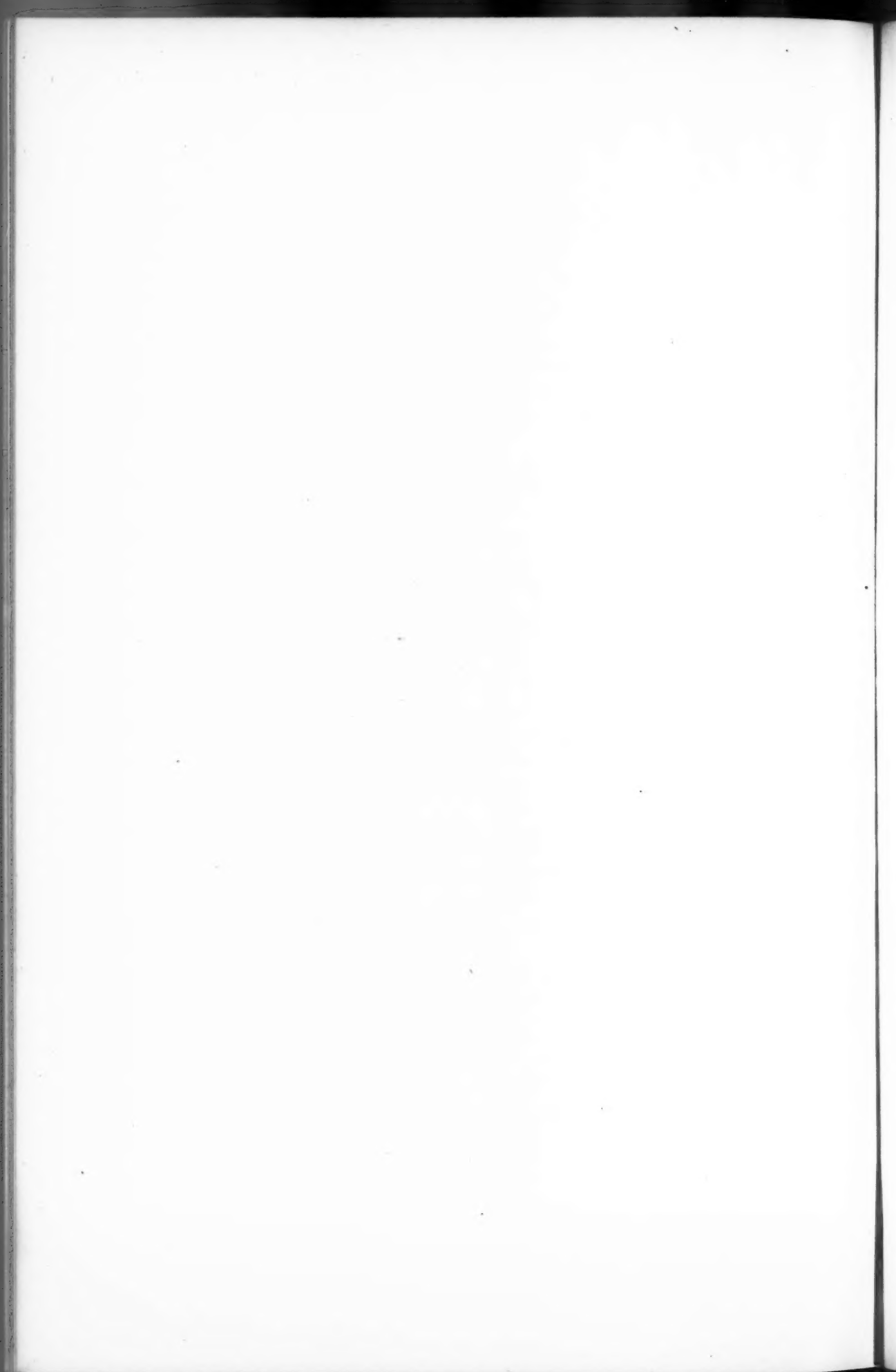


4a



4b

"EOLITHS" FROM PRETORIA.



upon strongholds and hiding-places where the mullers that had ground the snuff, the grinding stones for the paint, the flaking hammers, and the flake implements that had just been made, were lying as they had been left by the Bushmen in their haste to escape their enemies. I could not fail to recognise that here we were on the hot spoor of a vanished race, that we had just missed seeing in their native haunts a race that, in South Africa at least, links the present with the dim ages of the past. In after years I visited many of these cave-shelters; and, if I describe one, I describe the haunt of the Bushman wherever I have found them. A precipitous cliff, overhanging its base by 5, 10, or 15 feet, the floor of the recess from 50 to 500 feet above the level of the spruit or stream that almost invariably flowed near by, and commanding a wide view of the surrounding country. Immediately in front of the cave or recess, a steep talus of rubbish, fragments of rock, wood-ash, charred ends of sticks, and such like, extending downwards into a thick growth of tangled brushwood. Occasionally the brushwood had grown so as to hide the cave and to obscure the view from it; this growth may have come there since the haunt was untenanted; for, as a general rule, the Bushman liked to see about him. The talus served, too, as a kind of glacis, across which few of his enemies would venture to face his poisoned arrows. Not long ago I made the acquaintance of a Dutch farmer who had served on the Commando that exterminated the last horde of Bushmen in the Stormberg, and he assured me that they were very chary of attacking the Bushmen in their strongholds. He told me that the universal wear among the frontier farmers of that day was a kind of felted cloth, called Duffel, in preference to its being linen, because it stopped Bushmen arrows better even than the Vel-brocken or leather breeches ordinarily worn. Without a doubt then, the Bushman represents Neolithic man in South Africa, and any investigation into the habits of prehistoric races in South Africa should begin with him and work backwards.

The chief weapon of the Bushman, wherever he is still to be found, is the poisoned arrow. Into the unfeathered shaft of reed he fitted about 4 inches of bone, either ground to a fine point, or tipped with a triangular piece of iron, and dabbed over with poison. But there was a time when the Bushman tipped his shafts with flakes of agate, jasper, lydite, quartz, or quartzite, the best he could get. Blunt though it may have been, the force with which the arrow was driven home, and the deadly poison with which it was smeared, made it effective enough. Stone arrow-tips, however, are extremely rare; and, so far as I am aware, they are never barbed. There are, it is true, in the Museum at Bloemfontein three very small arrow-heads of chalcedony, showing traces of having been barbed, and said to have been found in a Bushman resort, near the Caledon River; but until more of the same type are forthcoming, the existence of barbed stone arrow-heads in South Africa is not sufficiently established. In the mountain haunts of the Bushman the "scraper" is the implement most in evidence. A score of these may be found as against a single knife-shaped implement or arrow-tip. So far as I am aware, no scraper has ever been found in a handle. The precise use of the "scraper" among

primitive races I leave others to determine<sup>1</sup>; suffice it to say, that it is the neolithic implement most abundant in South Africa. Occasionally in the talus of a Bushman cave,<sup>2</sup> but more frequently in the open veldt, we find very fine knife-shaped implements, like some of those in Plate III<sup>3</sup>; and corresponding with the long skinning-knives of the Coast region, shown in Plate I.<sup>3</sup> For the rest, we find in or near a Bushman's cave his muller, or grinding stone, his pounding stones and flaking hammers; one piece of grooved sandstone for straightening reeds for his arrow-shafts, and another for grinding down their points. We find bone needles and drills, rimers and polishing-stones—everything, in fact, that was necessary, as an auctioneer would say, in a well-appointed Bushman household. The celt or stone axe is not generally found either in the cave or in the talus, but usually lying exposed in the open veldt at no great distance from a cave-shelter, much in the same way as the perforated stones (see Plate XII<sup>3</sup>) in a district that has been occupied by Bushmen are generally found in or near the eye of a fountain, or in the neighbourhood of ancient game-pits.

## § II. *Caves at Mossel Bay.*

In thus following up my first introduction to archæology, with much later investigation of Bushman haunts and relics, I have passed by another field, where the impulse I had received during my short stay in Burghersdorp found fuller scope. From Dr. Kannemeyer I caught the infection, and the pleasant malady appeared in a stronger form eighteen months afterwards, when I went to reside at Mossel Bay, a small seaport half-way between Cape Town and Port Elizabeth.

(1.) The rocky headland that forms the south-western horn of the bay is known as Cape St. Blaize. Immediately below the lighthouse that crowns the promontory, the sandstone rock recedes inwardly, forming a semi-circular recess or cave, with a radius of about 15 feet. When I first visited the cave, some years previously, the floor was level. The dark soil of sand and wood ashes was littered with the shells of large edible molluscs, fragments of stone from the roof, flakes of quartzite, broken bones, and sea-worn pebbles. It could only be reached by

<sup>1</sup> In the description of Plate A, XXXIV, in Christy and Lartet's *Reliquiæ Aquitanicæ*, it is stated that "The applicability, and indeed actual use, of the round-ended flakes, called 'scrapers,' 'thumb-flints,' and 'finger-flints,' for striking a light with a piece of iron-pyrites, has been clearly illustrated by Mr. [now Sir] John Evans, F.R.S., and the Rev. Canon Greenwell." It is also said that a spark has been produced by two flints and caught on suitable material, such as dried moss.—T. R. J.

<sup>2</sup> Mr. E. J. Dunn also refers to the heaps of *débris* at the Bushmen Caves, and their contents of ashes, charcoal, bones of game, bits of pottery, stone implements, and pieces of stone, *Trans. Phil. Soc. of South Africa*, vol. ii (1880), p. 12; and Mr. W. D. Gooch refers to these and other sources of stone tools in his excellent memoir on the Stone Age, particularly the Neolithic period, in South Africa, in the *Journ. Anthropol. Inst.*, vol. xi (1881), pp. 124–183.—T. R. J.

<sup>3</sup> The author's MS. was accompanied by eleven out of twelve numbered photographic plates, each crowded with the implements found by him; but the absence of a scale of measurement lessens their value. As these plates will be kept in the Institute's Library, references are made to them wherever practicable in this paper.—T. R. J.

scrambling up a very steep talus of rubbish, at the risk of slipping downwards into deep water, or from the top by a still more dangerous path. The mussels on the rocks immediately below, the abundance of which is said to have given the bay its name, supplied the tenants of the cave with food, and a drip from the roof supplied the water. It was a very Gibraltar for defence, and, as events showed, a very Birmingham for industry. The cave, by the way, is described by the travellers Lichtenstein and Sir John Barrow. The latter, noticing the quantity of large shell-fish in the refuse on the floor, concluded that they had been carried up there by birds addicted to a molluscan diet. First conclusions on such subjects, however, are seldom correct; and this one of the famous African traveller was no exception.

On my second visit to the Lighthouse Cave I found that a great change had taken place. So much of the rock had been quarried for building purposes that access to the cave had become easy,—so easy, in fact, that farmers and townspeople had sifted out a great deal of the cave-earth, and carried it away as manure for their gardens. Heaps of the siftings, consisting chiefly of quartzite chips, shells, bones, and fragments from the roof, were lying in the cave, while cartloads had been thrown over the edge into the sea. Here and there, however, especially near the outer edge of the semi-circle, considerable masses of deposit were still undisturbed, and to these I at once directed my attention. There, where the roof was only a foot or two high, the bulk of the lumpy rubbish seems to have been thrown, so that the deposit consisted almost exclusively of shell *débris*, pebbles, fragments of rock, chips and flakes of quartzite, and fractured marrow-bones. The centre of the cave had been the hearth, and the deposit consisted largely of wood-ashes, charred bones, and other matter so rotten and ill-smelling as to justify its use as manure. In the undisturbed part of the deposit, I found very fine skinning-knives of quartzite, some of them 5 or 6 inches long, and as thin as a shilling. The number of perfectly formed implements, however, bore a very small proportion to the number of broken implements and mismakes, certainly not one to a thousand. The prevailing type of implement was the knife-like or leaf-shaped flake implement, with two cutting edges, terminating in a sharp point opposite to the bulb of percussion. These may be classified into arrow-tips, javelin-points, club-spikes, and half-a-dozen more varieties, according as they vary in size and shape, but I regard such classifications as more or less fanciful or tentative, pending more conclusive evidence and information as to the actual purposes to which they were put. A good deal of light on this point may be gleaned by examination not only of perfect but still more of broken specimens. I notice, for example, in thin chert and quartzite knives, deep notches that must have been caused by using the implements in a fashion that one looking at the perfect implement would never have expected. In such implements as borers, rimers, and scrapers the frequent occurrence of specimens worn with use practically settles the matter, but with reference to the flake-pointed implements, the evidence as yet is very inconclusive. Early in my cave-hunting experience at Mossel Bay, I happened to find an implement of indurated black shale, and a

close examination showed its edge so carefully and regularly notched, that I concluded it was a saw, although at that time I had never heard of prehistoric saws. As a matter of fact, the only literature I had read on the subject till I left Mossel Bay was an interesting article in Cassell's *Science for All*. In that article there was a sketch of the finds in the French caves and gravels, and in the kitchen-middens of Denmark, together with illustrations of the best known types. The correspondence between the implements there figured, and those I was finding in the cave was so remarkable, that I felt encouraged to persevere in a cave-hunting hobby, which was already making me locally notorious as a hopeless crank. Before leaving the question of cave-types, I may mention another type that I came across that was not figured in the books at my disposal, but which I am told is known as "bone-splitters." The implement I refer to is shaped like one of the bevel-edged chisels used by cabinet-makers. The cutting edge is a straight line at right angles to the direction of the blow which struck the flake from the core, in other words, the line of concussion. They are ideal wedges for splitting wood (see Plate VI of photographs), but I find difficulty in imagining their being used for splitting bone, which has little or no cleavage; indeed, I would hesitate to regard them as a separate type did I not find corresponding forms still more plentiful among the flake implements found on the surface and in the gravels of the Transvaal.

(2.) While working in the Lighthouse Cave, I heard of another, known as Bland's or the Guano Cave. For twenty or thirty years (I was told) "guano" had been carted by farmers from that cave, while one or two shiploads of it had been sent even to Mauritius. Naturally I lost no time in paying a visit to such a spot. I found the entrance to the cave about 15 feet above sea-level, in a cliff about 200 feet high. The cave is reached from the top by climbing down a very steep and rocky path, at the foot of which a 30-foot ladder takes one to the entrance. As this could not possibly have been the pathway used by its prehistoric occupants, I looked about for another. I looked in vain. Nothing resembling a path was to be seen, but I noticed that by a circuitous route over bare rocks, inclined at some places at an angle of  $45^{\circ}$ , a baboon, a Bushman, or possibly a bare-footed boy at the risk of his life might reach the cave. It must have been a perfect haven of refuge for those who knew the devious and dangerous path. It is a cave in the true sense of the word. The opening is not large; but inside the roof is high, and the far end is lost in cavernous darkness. It is not given to every anthropologist to see "cave-dwellers" at home, but such was my good fortune on that occasion. Stepping off the ladder, I clambered up the slope to the entrance. The scene that met my eyes I shall never forget. In the middle of the dark space, a fire of driftwood was burning, and in the light of it were sitting three Hottentots, naked to the waist, one tearing the meat off a bone with his teeth, the others busy helping themselves from a pot standing between them. As a picture of prehistoric man at home, it was complete, and it was not an illusion. Going into the cave, I

soon found that the occupants were three coloured men, bastard Hottentots from Mossel Bay, who from Monday to Saturday made the cave their home, and earned a livelihood by sifting out the so-called "guano," putting it into sacks, and selling it to the farmers who came in quest of manure. Occasionally a farmer would send three or four of his own Hottentots, a week in advance of his waggon, to get out the stuff. Quarrels frequently arose between the rival parties, neither of whom had any right there, with the result that even in recent times, dramas of a prehistoric character have there been enacted.

The cave appeared to be about 100 feet long by about 40 broad, with a roof about 20 feet above the present floor. On the walls could be seen the mark of the old floor, at least 10 feet above the present; and the Hottentots at work in the cave were sifting what seemed to be the bottom-layer of the deposit, 8 feet lower than where they sat. It was evident to me that the whole deposit had been sifted and re-sifted, and that the 10 feet of *débris* still in the cave consisted chiefly of siftings. I examined the deepest deposit, the one which the men were working. Beneath a mass of badly sifted refuse, there was a deposit, from 12 to 18 inches thick, of damp, black earth. Here and there in it were bones, to all appearance the leg-bones of ruminants, but so rotten that they crumbled on being touched. The deposit was just about sea-level, and this might account for the dampness, which is usually quite absent in other coast-caves. The *débris* consisted chiefly of fragments of rough-grained sandstone from the roof, mixed with large periwinkle and limpet shells, innumerable flakes of quartzite, and here and there the leg-bones of large animals. I regret now that I did not make a collection of these; but I was only a novice in archæology, and my concern then was with stone implements. The bones are still there, and when I next investigate this or another coast-cave, the bones will have my attention. In this lower deposit, I found a number of quartzite chips, and a few large and ill-shaped implements, but nothing that I cared to carry away. In a heap of siftings near the entrance I found a few flake implements similar to those I had found in the Lighthouse Cave. In a passage leading inwards at the back of the cave I found recesses packed full of bones, mostly leg-bones, but, as I have said, bones were not my object then, and unless some vagrant palæontologist has found his way to Bland's Cave, the bones are there unto this day. On the walls of the Guano Cave I could distinguish a mark showing the height of the floor before the deposit had been disturbed. From there to the bed rock, where the Hottentots were digging, was not less than 20 feet, which may be taken as the depth of the deposit.

(3.) Some months later, I came upon an undisturbed cave of the rock-shelter type, in the same neighbourhood, and at once set about making a section. This I found to be anything but a pleasant or healthy occupation. There was no drip from the roof, so that the deposit was as dry and as pungent as pepper. No sooner was it disturbed than an impalpable dust rose in the air, so as to make it nearly impossible to remain there. Persevering, however, I found that the centre of the cave had been the hearth, for the section was variegated with layers of

white wood-ash, and layers of dark, decomposed vegetable matter, probably grass or reeds used for bedding. Here and there were quartzite chips and flake implements, with shells, bones, and the charred ends of sticks, scattered here and there throughout it. Round the edges of the cave, and lying against the rock, I found the deposit loosely cemented, evidently by water running down the face of the rock. Here I found several fine implements, and I still have a piece of the cemented mass showing a typical mixture of shells, bones, sand, and stone implements.

I have said that the implements in these caves were mostly of quartzite, which is the local rock, but I ought to mention that pebbles of other material—chert, agate, chalcedony, and hardened shale—are not infrequently found on the coast, these having been brought from the interior by floods on the Gowritz River close by. I have often noticed, too, that a piece of these harder rocks is rarely found in a cave-shelter without traces of its having been worked upon. Vitreous quartz was evidently a favourite, though refractory, material among these people, for I never found a scrap of it that had not been chipped to some extent. The cave proved a shallow one, and I cannot say that I was able to distinguish any difference in the form or finish in those implements that were on the surface of the floor from those on the bed-rock.

### § III. *Caves near East London.*

As bearing on the age of those cave-deposits, I wish to mention a rather interesting discovery I made at East London, only a couple of years ago. After examining a number of shell-mounds on the south-west bank of the Buffalo River, I heard of a cave known as Bats' Cave on the coast, about two miles to the north-east. I found the Bats' Cave in the first cliff I came to in that direction, but there were no spoils for me. Returning rather disappointed, I chose the lower path, and found myself on the beach below high-water mark, where some large masses of rock projected through the wet sand. Above me, instead of a cliff, was a steep sand-bank. My eye fell upon a mass of rock dotted with pebbles, and differing in colour from the local stone. Having a prospector's eye for "conglomerates," I went to examine it closely, and I noticed then that besides pebbles there were periwinkle and oyster shells projecting from the surface, and not only these but plenty of chips and some well-formed flake implements. I found myself looking, in fact, at a mass, weighing some hundreds of tons, which was neither more or less than cemented cave-deposit.<sup>1</sup> I looked about for the cave. It was gone! The nearest cliff was a hundred yards away. With the aid of a large nail found on the spot and a large pebble, I was able to get out several more or less perfect implements. The best of these is made of a hard black siliceous shale. The cliff in which that cave-shelter had been is gone,—clean gone, while the cemented floor, formed doubtless by the spray

<sup>1</sup> The remains of the floor of an old bone-cave, partly in a garden, at Mellitre, in Malta, was described by Captain Spratt in the *Quart. Journ. Geol. Soc.*, vol. xxiii (1867), p. 290.—T. R. J.

driven into the cave, while it was yet a cave, remains. Even allowing for the fact that the local rock is of a somewhat friable nature, and that the coast is exceptionally exposed and stormy, it will be seen that the occupation of these coast-caves is not a thing of yesterday. The presence of calcareous floors in the coast-caves is accounted for by the presence of shell *débris* in the deposit. The caves being in sandstone there is no calcareous drip to form stalagmites, but the drip of water from the roof, and, in some cases, the spray from the sea in heavy weather, falling on the deposit (75 per cent. of which is shell-refuse) produces the "cement" in which the flake implements are frequently found imbedded.

#### § IV. *Shell-mounds.*

Years before I began to take any interest in archæology, I had noticed heaps of shells at various points on the south coast. On inquiring about their origin from people on the spot, I was told that they were heaps of shells that had been gathered by the farmers many years ago, to burn for lime, and left there. I was satisfied with the explanation at the moment; but the article I read in *Science for All*, and my finds in the caves, led me to suspect that they must be kitchen-middens. The coast from Cape St. Blaize to Great Brak River is literally dotted with them. Together with a friend, I examined a number of them, and found that my surmise was correct. Among the shells of edible molluscs and sand (which constituted the mass of the mounds) I found a great deal of broken pottery, differing, however, from the pottery of the Stormberg Caves in having no ornamentation, and containing roughly pounded white quartz. I found bones mostly of small game, hogs' teeth, broken ostrich egg-shells, two or three bone needles, and a good many quartzite flakes, but scarcely a single well-shaped implement. The presence of the great implement factory under the Lighthouse (p. 260) might partially account for this, but a long series of shell-mounds near Port Elizabeth, and a few on the west side of the Buffalo River at East London,<sup>1</sup> yielded practically the same small result. The exception to this rule I found at Port Alfred, near the mouth of the Kowie River, where some shell-mounds yielded, in addition to what I have mentioned, some very beautifully formed implements, chiefly scrapers in chert, jasper, agate, and chalcedony, which will compare favourably, as regards form and finish, with the finest European or American examples. Some very beautiful implements of the same class, said to have been found near the mouth of the Umzinkulu River in Natal, are to be seen in the Durban Museum. Equally fine, if not finer, implements of chert have been found near the mouth of the Liesbeck River on the Cape Flats, and in these the art of neolithic man in South Africa seems to have reached its highest point. This localisation of high-class implements is rather remarkable. Probably the presence of pebbles of the most suitable material may have had something to do with it. From the character of the pottery found in them and other indications,

<sup>1</sup> See also the "Note on a Shell-Mound, and other Evidence of Prehistoric Man, near East London, Cape Colony," by Mr. G. R. McKay. *Natural Science*, vol. xi, p. 334.—T. R. J.

I am inclined, however, to attribute the non-implement-bearing shell-mounds at Mossel Bay, Port Elizabeth, and East London to Hottentots who doubtless paid periodical visits to the sea-coast when times were bad on land, or for a change of diet. Further investigations on the spot will doubtless throw more light on this point.

The mouths of rivers are the favoured spots for these shell-mounds. Fresh water and shelter from the fierce south-east winds seem to have determined the selection of camps by the kitchen-middeners of South Africa. If shell-mounds are found at a considerable distance from a stream, water will be found trickling from a rock in the near neighbourhood; or if there are no rocks, then it will be found in the sands below high-water mark.

#### § V. *Large Implements near St. Blaize.*

Before leaving the subject of coast-deposits, I wish to refer to the presence of much larger and ruder quartzite implements that I found on the slopes of the hill and on the sandy flats behind Cape St. Blaize. They very much resemble in appearance the rude implements that I afterwards found on the Transvaal, and to which I shall refer later on. Their presence goes far to confirm me in the belief that, while the latest occupants of the coast-caves may have been of the Bushman type, these places had been the haunts of an older race of men; a race physically more powerful, but much lower in the scale of civilisation than the dwarfish Bushmen. Among the rude implements strewn upon these Flats, I found some very fine examples of the Stone Axe type; which I am inclined to regard as the highest point in art reached by the pre-Bushman dwellers on the sea-coast. There is, I may say, some historical ground for believing that the remnant of such race came in contact with the first Dutch settlers at the Cape.

The readers of Mr. George Theal's very excellent history of Cape Colony will remember that the aboriginal races first to give the settlers trouble are described as "Strandloopers" (Beachrangers), a race of untruthful and unreclaimable savages. Later they came into contact with nomadic pastoral tribes of Hottentots. Later still, and not until many years had elapsed, did they learn that there existed in the mountainous districts a race of men who were, not only *not* Hottentots, but the most implacable enemies of the Hottentots. These, the Dutchmen then distinguished as "Bosjesmannen" (Bushmen). The presence of large stone axes and other rude and ponderous implements on the littoral of Cape Colony and Natal leads me, therefore, to the belief that on their arrival in South Africa the first Dutch settlers saw in these "Strandloopers" the last remnants of a paleolithic race in South Africa. That they should have so quickly disappeared need not surprise us, for in the same way the Karankuas (a race of Florida beach-rangers), and several tribes of Patagonians have disappeared since the beginning of this century.

§ VI. *Stone Implements near Pretoria in the Transvaal.*

(1.) In 1889, I left Mossel Bay and took up my residence in Pretoria. I had many things of more importance to think about, and archaeology was not in my thoughts, when one day, on my way to business, my eye fell upon a stone on the pavement, and I stopped. On picking it up, I saw plainly the "trade-mark" of primitive man, the sign-manual of my Mossel Bay cave-men (the bulb of percussion). "Hullo," I said aloud, "are *you* here?" and my friend with me rather anxiously asked what was the matter. I did not care to enter into a long explanation just then, so I merely said that I saw in the stone a family resemblance to stones I had seen in the Colony. He was satisfied, but the old spirit was reawakened in me. The streets were being made (and in that enlightened city, are still being made) by dumping cartloads of gravel on the streets, spreading it a bit with the shovel, and then leaving natural forces and waggon-traffic to do the rest. It was a red ironstone gravel, with a good many water-worn stones in it; and day after day, as I went to and fro, I filled my pockets with rude, but unmistakable, stone implements of various types. I found that the gravel was being carted from a deposit lying immediately below the Artillery Camp, on the southern or upper side of the town. In the gravel, at depths varying from the surface to 3 feet, I found implements similar to those I had found in the streets; and I noticed too that both sharp and water-worn implements were found in juxtaposition. Among those I found in position, about a foot below the surface, was a very fine axe. It was lying in a kind of water-vein, and seemed so rotten that I was almost afraid to handle it.

Of the various implements found in that gravel I have made a large collection, but they are neither very perfect in form nor beautiful in finish (see Plate X of photographs); they are none the less of extreme interest to those who would read in such stones the history of human art. The presence of water-worn stones in this deposit determined me to look for others at a higher level. This I succeeded in finding, and shall refer to it later in this paper.

On the surface, and in water-worn ruts in the same deposit, but at different levels, I found a number of very perfect axe-like tools. I found, in short, that the surface of the whole country is strewed with these relics of primitive races, varying in material with the locality, in every variety of size and form, some worn and rubbed with long attrition, some as fresh and sharp as if they had been made yesterday.

(2.) Thus the mystery of the past deepened upon me, and the riddle which I imagined I had read on the coast was replaced by one too deep for me. The difficulty, however, became more involved. I strayed, one Sunday morning about five years ago, into a brick-field, and began to examine the stones that the brick-makers had thrown aside out of their way, and there, among fragments of rock and water-worn boulders, I found flakes and flake implements that took my breath

away. I could not doubt their human origin without recanting all I had seen and learned since I began to take an interest in stone implements; yet here were implements or weapons that no ordinary hand could grasp or wield, the flake-faces distinct, and the edges comparatively sharp. I found some of them in the clay, in a thin line of gravel, evidently an old surface; and with them, in one case, a fractured flaker or hammer-stone. These examples are both bulky and heavy, and photographs (see Plate XI of photographs), will convey some notion of their appearance. Every week I spent a few hours prowling in that insanitary neighbourhood, till my finds grew so poor that I gave it up and went elsewhere.

(3.) I next gave my attention to the highest deposits of gravel in the neighbourhood, from which deposits I suspected the water-worn implements to have been derived. These deposits I found lying on the steep slope of the hills on the south side of Pretoria, at a height of perhaps 200 feet above the present level of the nearest stream. I have not been able to ascertain the depth of the deposit, but my impression is that the torrential rains of our wet season have already carried most of it into the valley below.

The stones of this deposit are characterised by a brown, shiny patina, so marked that I have been able to recognise the deposit at a distance of several hundred yards. Nor was this merely a local deposit, but will be found, I believe, at or about the same elevation for scores of miles, just where what is known as the "High-veldt" breaks into great valleys, eroded by the effluents of the Crocodile (Limpopo) River.

As to the various types of implements found in these higher gravels, suffice it to say that I notice among them almost every well-defined type that obtains among the finest and most recent Bushman and Coast-cave implements. I wish to mention particularly the presence in this drift-gravel of stones which, while they bear no evidence of having been shaped by primitive men, show unmistakable evidence of having been used by him. The evidence I refer to, consists of hacked and abraded edges, sometimes irregular, sometimes in convex, sometimes in concave curves.

In almost every case they are more or less water-worn. I noticed these peculiar stones as soon as I began to examine the Camp gravels, and kept throwing them away till the number I met with, and the persistency of their characteristics, led me to collect them, and call them "Eoliths," for I could conceive nothing more primitive in human art than that men should use as implements or weapons the natural angles of common stones.

What I call "Eoliths" are all traceable, I believe, to the High-level Gravels (H. H. on the sketch-map, Plate XVII, Fig. 1), although they may be found anywhere lower down. They are invariably water- and weather-worn, with a peculiar brown patina, except when washed down into the Brick-earth.

About two years ago, Mr. Nicol Brown, of London, in looking over my collection, recognised in these the cognates of the implements discovered and described by Mr. Harrison, of Ightham, in the plateau gravels of Kent. I have

since seen Mr. Harrison's collection, and nothing can be more marvellous than the correspondence between my implements of the plateau gravels in the Transvaal and those that he has found on the chalk of Kent.

Four of these notched scrapers (Plate XVIII, Figs. 1-4), found by Mr. Leith, and brought to England by Mr. Nicol Brown, F.G.S., are here figured as follows:—

Figs. 1*a*, 1*b*.—From Springbok Flats, Waterberg, forty miles due north of Pretoria. From the surface of the plain or flats. Not stained dark brown like Figs. 2, 3, and 4. In fact, the thin edges of the quartzite is subtranslucent and sharp, showing that probably the implement was of relatively recent manufacture like the flint specimen found by General Pitt-Rivers in Egypt. (*Journ. Anthropol. Inst.*, vol. xi, Plate XXX, Fig. 6.)

Figs. 2*a*, 2*b*.—Daspoort, on the north side of Pretoria, before coming to Wonderboom; at the base of the Camp Gravel.

Figs. 3*a*, 3*b*.—Camp Gravel; near the Railway Station, Pretoria.

Figs. 4*a*, 4*b*.—Muckleneuk near Pretoria, in a dry water-furrow, lower than Mr. Leith's house.

In *Natural Science*, vol. xii (1898), p. 115, Mr. Lewis Abbott briefly referred to these specimens; and in a letter he describes the specimen shown in Fig. 3 as "a fine-grained, ferruginous quartzite, smooth, and of a dark-brown colour externally. The surface is rather much altered, and is somewhat water-worn all over. The worked edges are less water-worn, and in the upper cracks are deposits of iron-oxide. It has a subconchoidal fracture. Every blow was dealt at the periphery, and has left a distinct pit of percussion; and all the blows down the right side were administered at the same angle. Except on the right side, I regard the shape as wholly natural. The small hollow was produced by one blow; but the edges look very much as though they had been hand-worked. The large hollow was certainly 'worked' out before the stone had entered the gravel."

These implements are comparable with several of those described (some figured) by Sir Joseph Prestwich in the *Journ. Anthropol. Inst.*, vol. xxi (1892), pp. 246-276, Plate XX in particular; A. M. Bell, *Ibid.*, vol. xxiii (1894), pp. 266-284; O. A. Shrubsole, *Ibid.*, vol. xxiv (1895), pp. 44-49, Plate III; T. R. Jones, *Natural Science*, vol. v (1894) p. 270; W. Cunningham, *Ibid.*, vol. xi (1897), pp. 327-333, Plate IX, arguing that the plateau implements are modified frost-flakes; A. S. Kennard, *Ibid.*, vol. xii (1898), pp. 27-34; R. A. Bullen, *Ibid.*, pp. 109-112, Plate VI in particular; W. J. L. Abbott, *Ibid.*, pp. 112-116; and Prestwich, *Collected Papers, etc.*, 1895, pp. 62-72, and Plate V in particular.

The section, Plate XVII, Fig. 2, shows clearly the falling-away of the surface from the edge of High-veldt northwards, and the relative position of the three deposits of gravel mentioned in this paper. The Magaliesberg range, lying N. of Pretoria, runs nearly E. and W. for almost 100 miles, intersected at Crocodile Riverpoort, Wonderboom-poort, and Elands-poort, by the Crocodile, Aapies, and Elands Rivers, draining the north slope of the High-veldt. To me, the Magaliesberg, with

the parallel foothills, are merely vestiges of the High-veldt, scarped by glacial or diluvial currents flowing east and west.

The High-level Gravels at H, which contain the *Eoliths* and the most primitive-looking palæoliths, belong to the earlier period of that denudation.

The Ironstone Gravels, marked I, were formed at a later period, when long, narrow, and shallow lakes lay in the valleys. As the narrow channels at Daspoort and Wonderboomspoort were deepened, the lakes were drained; and the Aapies River, which burst as an underground river out of the Dolomite, a few miles above Pretoria, and carries the surface-water of a small area, has cut its way transversely through both these gravel deposits, and made large deposits of gravel on its own account, at T, where the fall is not so great. In this deposit we find both rude quartzite palæoliths, whose edges are as sharp as if they had been made yesterday, and others, equally or still more rude, with angles so water-worn that they might have drifted a hundred miles. I do not think that the relative ages of the three gravel deposits are open to question. The time that elapsed between the periods of their deposition is another question. To make the problem more difficult, I find everywhere on the surface, and in the beds of present-day streams, implements that are undoubtedly of comparatively recent manufacture. The difference in form and finish between these and the best finished implements found *in situ* in the Ironstone Gravels is generally very slight, the material being in most instances that of the local rocks, quartzite, hard schist and dolerite.

The brown crystalline sandstone, of which the high-level implements are here almost invariably composed, often breaks up into prisms and wedge-shaped pieces. The former are indented on their long edges, as if by violent blows, and the latter on the thin end.

(4.) My latest find in the Transvaal is scarcely less interesting or less puzzling. At a spot on the Aapies River, about six miles below Pretoria, there is, or used to be, a bank of gravel close beside the river, and rising about 20 feet above it. Here on the surface six or seven years ago, I found some water-worn palæoliths, and a few sharp-edged flake implements. About a year ago, the track of the Pretoria-Pietermaritzburg railway was laid down to pass the spot, and a contract was given to some Italians to sift and prepare the gravel for ballast. Going out there one day, I found a number of very rude but not the less remarkable, implements, including not a few answering to the description of the American "Turtlebacks." I pointed them out to the contractor, and asked him, if he happened to find more, to put them aside for me, which he did. The puzzling fact is the juxtaposition in the deposit of very much water-worn specimens and others with edges as sharp as if they were made yesterday. The material of both classes of implements corresponds very closely to a bed of quartzite, extending from the Magaliesberg Mountains, where the river breaks through them, to the spot where they are found, a distance of about three miles.

The implements are of the local rock, and have been made within a short

radius of where they were found. How some of them come to be so much water-worn is what I cannot explain.

### § VII. *Special Implements.*

It only remains for me now to draw attention to a few implements, the co-relative forms of which are familiar to those who have studied European or American archæology.

The muller or corn-grinding stone.—These were used by the Bushman and the Hottentots, and are still being used by the Kaffirs. The South-African forms are in no way different from the European mullers. Besides some pounding-stones, I have some which have probably been used as flaking-hammers. I was struck in caves containing tons of flakes by the absence of flaking-hammers. This may be explained by the fact that broken flaking-hammers are probably in time used up in the manufacture of flake implements; but I am inclined to the opinion that the workers in stone did not use special hammer-stones, at any rate for knocking off the larger flakes, but picked up the handiest pebble within reach, and when done with it was thrown away. On many of the pebbles that abound in the coast-caves, one or two abrasions may be seen, while a very few show a patch of surface much damaged by percussion.

A well-known form of implement is the perforated digging-stone (see Plate XII of photographs), so called because they were used as make-weights on digging-sticks, both by Bushmen and Hottentots. I am strongly of opinion, however, that though undoubtedly used for that purpose, they were not *made for that use* by either the Hottentots or Bushmen, if indeed they were made by these races at all.<sup>1</sup> In the majority of cases, the perforation is large enough to admit such a stick as was used for digging roots and game-pits. One example shows unmistakable evidence of having been so used. A great many, however, do not. Their weight, and the smallness of the hole, make it impossible for them to have been used in that way; in others the smallness and lightness of the stone would render them useless. These perforated stones may have been, and probably were, used for many purposes; but who made them, and for what purpose they were originally made, are questions not easily answered. I have also a ring stone, ground to an edge. This was found near Maritzburg, in Natal; and there are about half-a-dozen more in the various museums in South Africa. This form, I may say, represents the *only* ground or polished implement that I have seen or heard of in Africa. Two rimers from the Stormberg are typical implements, corresponding in form almost exactly with European and American models. I have a very typical "fabricator" from the Springbok Flats, which constitute a tract of dry, but well-wooded country, lying between the Pienaars River, 30 miles north of Pretoria, and the Waterberg Mountains. This tract used to be the home of myriads of springbuck and other antelopes; and naturally

See also the memoirs of Dunn and Gooch referred to above.—T. R. J.

where these abounded traces of primitive hunters are to be found. As a matter of fact, these flats are sown thick with flake implements. Go wherever you like across them, you find implements made from the local rocks, or chipped from the agate, chalcedony, and jasper pebbles that abound there. Rarely or never, however, is a perfect implement found, for the hoofs of myriads of antelopes, and the herds belonging to the Dutch farmers who winter there, have trodden them to pieces. They were, doubtless, the handiwork of hordes of Bushmen who preyed on the game till the intrusive and better armed Kaffir drove them into the Kalahari.

Here in South Africa, too, we meet the enigma of the spherical chipped balls. (See Plate XII of photographs.) I have one from the Sand River in Zoutpanisberg, and one from Winburg, in the Orange Free State. In the Bloemfontein Museum there are nearly a dozen, all found near the borders of Basutoland. Strange to say, some of these were found along with three stone axes in a gold-bearing alluvial gravel, a few miles from Krugersdorp. One of the balls is now in the British Museum. The finder of the axes sent them to me. The relation between these implements and the nuggets of gold, found together in that plateau gravel, is another problem I leave for others to solve.

#### *Explanation of Plates XVII and XVIII.*

##### *Plate XVII.*

Fig. 1.—Sketch-map of the neighbourhood of Pretoria, in the Transvaal. See p. 269.

H.—The High-level Gravels.

Fig. 2.—Geological Section of the same district.

E.—Edge of the High-Veldt : 5,000 feet above the sea-level.

S.—Source of the Aapies River in the Magnesian Limestone.

H.—High-level Gravels, with waterworn palæoliths and eoliths.

I.—Iron-stone Gravels, with both sharp and waterworn implements.

T.—Thorn's Gravel, with waterworn palæoliths.

Distance from E to X 24 miles, south to north.

Fall of the ground from E to X, 1,200 feet.

##### *Plate XVIII.*

"Eoliths" from the Transvaal. See page 270.

Fig. 1a.—From the Springbok Flats, 40 miles north of Pretoria ; 1b, end view.

Fig. 2a.—From Daspoort, north of Pretoria ; at the base of the Camp Gravels ; 2b, end view.

Fig. 3a.—From the Camp Gravel, near the Railway Station, Pretoria ; 3b, end view.

Fig. 4a.—From Muckleneuk, near Pretoria ; 4b, end view.

Figs. 2, 3, and 4 are much waterworn.

#### DISCUSSION.

Mr. NICOL BROWN remarked that he had walked over part of the ground exhibited in the diagram on the wall, near the Pretoria Railway Station, where Mr. Leith had found implements. At first it was difficult to get Mr. Leith to see that the cutting edges of the implements were the curves on the stones, like Mr. Harrison's plateau implements ; but eventually he became convinced of this,

and has in consequence since seen Mr. Harrison, and satisfied himself on the subject. Mr. Leith is a very close observer, and it is hoped he may find more implements on the "happy hunting ground" on which he lives.

Mr. W. Y. CAMPBELL, in response to the Chairman's call, expressed his pleasure at finding the work of two fellow South-African colonists appreciated by the Institute. He might say that as far as the stone instruments on the table were concerned, they need not be all classed as ancient or as having died out, for one of the large ones, an axe-shaped stone, [from Swaziland] was a familiar instrument with the expert hide-carriers of to-day in Zululand.

Referring to the stone remains in Rhodesia, he had inspected most of them and likewise the mining systems of the ancients there. His conclusions were totally opposed to those of the gifted archæologist the late Mr. Theodore Bent. The ruins and the mining were all part and parcel of a great native polity, the Empire of Monomatapa (*anglicè*, the people who burrow or mine). Outside waves of foreign nations, Phœnicians, Moors, Indians, Portuguese, had all in turn visited that empire through the centuries; and, as protected barterers of foreign products for native gold, resided in Monomatapa. But that the rough stone depôts of the mining districts of Monomatapa were other than depôts and head kraals of a ruling and most probably Bantu race he could not admit, on the multiplied evidences he obtained in some 2,000 miles of travel in Monomatapa, now Golden Rhodesia. He was of opinion that mining in Rhodesia was anything up to 2,000 to 3,000 years old; and, if he was forced to guess an origin for the dominant race which founded this great mining empire that lasted so many centuries, and fell to pieces just about the time Vasco da Gama rounded the Cape—that mined by surface-mining only many millions of tons of gold-bearing quartz, all by hand-power, reduced the good ore by spalling and then by stone mortars, still by hand, and won the gold grains by patient work of millions of forced hands, and shipped it to the East for many centuries, and probably to the extent of hundreds of thousands of ounces,—he would look to Egypt,—to the disappearance of that wondrous people the Shepherd Kings. Take the well-known Hyksos, a peculiar type of race, only to be found to-day in the dominant Bantu races south of the line in Africa. The primitive gold mining and extraction processes fitfully pursued at Gondokoro to-day, are identical with the process at the same place B.C., as recorded by Diodorus Siculus, and identical with the methods of Rhodesia as pursued for centuries by that vanished polity, the Empire of Monomatapa. The emblems, religious and other, on which Mr. Bent largely based his theories, were in Mr. Campbell's opinion not necessarily original and inherent emblems, but incidental, according to the particular wave of bartering civilisation that happened from time to time to be in favour. He saw recovered in one ruin a silver Jesuit seal and a last-century King George brass umbrella-plate.

Mr. J. BALLOT observed that the most interesting fact brought forward by Mr. Leith in his able paper was, that he believes to have discovered in the Pretoria valley-gravels old stone implements resembling in shape, chipping, and character the old Kent plateau "brownies" and flints of Mr. Harrison, only that Mr. Leith's implements are of quartzite and not of flint. If this were so, it seemed fair to assume that the races of man in both localities used them for similar purposes.

Admitting this, one would naturally ask, did the users in Britain and in the Transvaal live about the same time? or, did the Pretoria-valley folk live at a more recent period? And if the latter, the mere similarity of implement cannot be taken to represent or indicate the same age chronologically.

In the old Kent plateau-flints of Mr. Harrison, the speaker had, so far, not come across any specimen of the circular worked flints, showing a cutting edge worked on by chipping, which would in any respect have better served as a "cutter," or "scraper," than the sharp edges of any plain fractured flint, quartz or quartzite. He ventured to suggest that Mr. Leith's implements were used by a comparatively recent race as "strike-a-lights," using with them iron, iron-pyrites, or harder quartzes. And probably also a similar explanation of the uses of the old Kent "brownies" of Mr. Harrison, may apply. The curves we now find on these old stones appeared to him clearly to satisfy the "strike-a-light" theory.

The chisel, or axe-shaped tool, exhibited on the table and referred to by Mr. Campbell, the speaker knew to be in use, more or less in the same form, at the present day.

Mr. Ballot thought that it would be of great interest and value if Mr. Leith would more exactly determine the position, *in situ*, in the gravels, in which these old implements occur, and whether they do or do not occur even on the present hill slopes.

Professor RUPERT JONES thanked Mr. Campbell and the other speakers for information given about the occurrence and use of stone implements, and hoped for more. He did not think that the hollow curves in the "old brownies" (frost-flakes, used as stick-shaves), could have been shaped by fire-strikers. He referred to flint strike-a-lights, illustrated in the *Reliquiæ Aquitanicæ* (description of Plates A, pp. 138 and 139, Figs. 26 and 27), with a notice of how a pair of flints were used

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## SPECIAL MEETING.

DECEMBER 14TH, 1898.

F. W. RUDLER, Esq., F.G.S., *President*, in the Chair.

The Minutes of the last Meeting were read and signed.

The PRESIDENT introduced Professor BALDWIN SPENCER, M.A., of the University of Melbourne, who read a paper on "The Native Tribes of Central Australia, with special reference to their Totemic Systems." This was amply illustrated with a series of admirable photographs and lantern slides.

Professor TYLOR complimented the lecturer upon his paper.

Professor J. G. FRAZER read a short paper dealing with some of the views of Professor BALDWIN SPENCER, and the discussion was carried on by Professor RIDGWAY and others. A hearty vote of thanks was passed to the author of the paper.

SOME REMARKS ON TOTEMISM AS APPLIED TO AUSTRALIAN TRIBES.<sup>1</sup>

BY PROFESSOR BALDWIN SPENCER, M.A., and F. J. GILLEN.

IN our work upon *The Native Tribes of Central Australia*, we have described in detail certain features concerned with the totemic system of the Arunta, Ilpirra, and other tribes, and at the suggestion of Mr. Frazer, to whose work and personal assistance we are deeply indebted, we venture to put forward certain tentative ideas with regard to the possible meaning and origin of totemism as applied to our Australian tribes—ideas also which have independently suggested themselves to Mr. Frazer.

Totemism, to use Mr. Frazer's terms, has both a religious and a social aspect, and it would appear that in the Arunta and other Central Australian tribes, the former, which we believe that Mr. Frazer would now prefer to designate as magical rather than religious, is predominant, whilst in the coastal tribes such as those dealt with by Messrs. Fison, Howitt, and other workers, the social is at the present day the predominant feature, the religious or magical being but slightly marked. In the case of other tribes, such as the Urabunna and Dieri, the area occupied by which lies between that of the Central and Eastern coastal tribes, the social aspect is strongly marked, but at the same time the religious is also clearly indicated.

In all tribes, so far as is known, there is supposed to exist some special connection between the material object and the members of the group of individuals who bear its name as their totemic name, while in addition to this, in certain tribes, the social aspect is revealed by the fact that members of one or more particular totemic groups are restricted in their marital relations to the members of other particular totemic groups.

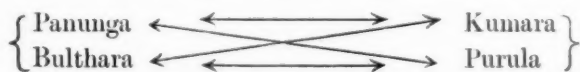
In addition to these totemic groups we find in all Australian tribes, with very rare exceptions, that there are other and larger social divisions which are variously designated as class and sub-class, or phratry and sub-phratry, and that primarily each tribe is divided, quite apart from the totemic groups, into two exogamic moieties.

In the majority of Australian tribes yet studied, each exogamous moiety has been found to include a certain number of totemic groups, and the latter have, in consequence of this, been described as exogamic. If, for example, we take the Dieri or Urabunna tribe, we find that there are two moieties, one called Kirarawa and the other Matthuri, and that in the former are included such totemic groups as carpet snake, lizard, crow, and in the latter others, such as duck, dingo, emu.

<sup>1</sup> The substance of these remarks was delivered by Professor Baldwin Spencer at the meeting of the Anthropological Institute held 14th December, 1898.

Now, as a Kirarawa man must marry a Matthuri woman, it follows that a man of one totem can only marry a woman of another, and thus the idea of the close association of totemism and exogamy has been brought about.

In the Arunta and other tribes we find a very different state of affairs, and it would appear to be quite possible that the original aspect of the totem is simply a religious or magical one, and that the social aspect has been, as it were, tacked on at a later period. In these tribes we find (1) a division into exogamic moieties and (2) a division into totemic groups which are not exogamic, that is, each of the exogamic moieties includes totemic groups of the same designation. Each original moiety has been divided into two, so that there are now four divisions in the tribe, two of which represent one moiety and the remaining two the other. This may be represented in the following diagram :—



Here Panunga and Bulthara represent one moiety and Kumara and Purula the other. The crossed arrows represent the marriage obligation, the horizontal arrows indicate the division into which the child passes. Thus if a Panunga man marries, as he must, a Purula woman, their children are Bulthara; if a Purula man marries a Panunga woman their children are Kumara, and so on. Now, each of these four divisions may include members of one totemic group, so that, for example, a Panunga man of the emu totem may marry a woman of the emu totem provided she belong to the Purula.<sup>1</sup>

We thus see that in these tribes the totemic groups are not exogamic; we have the same exogamic moieties as in the Dieri, Urabunna, and, indeed, most Australian tribes, but each moiety contains totemic groups of the same designation.

If now we turn to the Arunta tribe, which may be taken as representative of those in which the totemic groups are not exogamic, we find an important series of traditions. They deal with the former existence of a state of affairs which is not only very suggestive, but, inasmuch as it differs from the system now in vogue, the traditions may, perhaps, be reasonably supposed to point back to a time when conditions were in reality very different from those which now obtain. It is, of course, quite open to question as to how much reliance is to be placed upon them. If they simply explained the origin of the present system out of, as it were, no system, then we might regard them as simply myths invented to account for the former, but when we find that they deal with a gradual development and with a former state of organisation and customs quite different from and in important respects at variance with the organisation and customs of the present day, we are probably right in regarding them as actually indicative of a time when these were

<sup>1</sup> Full details with regard to this are given in *The Native Tribes of Central Australia*, cap. ii. In actual practice only half of the Purula women are eligible as wives to any particular Panunga man, but this does not affect the main point, which is, that a Panunga emu man may marry a Purula emu woman.

different from those now in force.<sup>1</sup> Summarising the traditions very briefly what we find is this :

- (1) A time when men of one totem had marital relations normally with women of the same totem.
- (2) A time when men and women of what are now exogamic groups had marital relations.
- (3) A time when exogamic divisions were in force but different from those of the present day.
- (4) A time when the present exogamic divisions were introduced.

It may also be noticed, in passing, that the introduction of changes is definitely ascribed to certain leading influential men who were the heads of powerful local groups.

For the present purpose the most important point to notice is the traditional existence of totems long before that of exogamic groups, and the fact that when the latter did arise, the totems were not affected by them ; in other words totemism appears to be a primary and exogamy a secondary feature. At the present day in the Arunta tribe, in which each individual is regarded as the reincarnation of an ancestral spirit, the latter by entering the body of a woman belonging to a particular exogamic group may change his own group, but his totem never changes.

In the earliest times of which we find any tradition we meet with totemic groups, and the one important feature of all of these is that their numbers are charged with the duty of performing certain magical ceremonies called *Intichiuma*, the object of which is that of securing the multiplication of the particular object, the name of which is borne by the group as its totemic name. It would appear as if there were at all events a strong probability that this, amongst our Australian tribes, may be the primary function of a totemic group just as it is at the present day in the Arunta, Ilpirra, and certain Central Australian tribes.<sup>2</sup>

It may, perhaps, be objected to this, that in the case of these tribes we are dealing with abnormal ones in which the totems have a different signification from that which is borne by them in other tribes in which the totemic groups are exogamic. To this it may be replied that there is very clear evidence that the totemic groups in various other tribes, such as the Dieri, Urabunna, and others to the north-east of Lake Eyre, in which the totemic groups are exogamic, are charged with precisely the same duty, for in these, just as in the Arunta and Ilpirra, we meet with ceremonies which are clearly the exact equivalents of the *Intichiuma* ceremonies already described by us.<sup>3</sup>

At the present day a man may only eat sparingly of his own totem, but it would appear as if in earlier days there were no such restriction. We meet, for example, with traditions such as the following ; groups of plum-tree men feeding regularly upon plums ; wild-cat men are changed into plum-tree men and after that travel on feeding upon plums ; a bandicoot woman changes a Hakea tree

<sup>1</sup> A detailed account of these traditions is given, *op. cit.*, cap. x and xi.

<sup>2</sup> These ceremonies are described in detail *op. cit.*, cap. vi p. 167.

woman into a bandicoot, who then goes on feeding upon bandicoots; a wallaby man wishes to kill and eat a kangaroo, but before doing so he has to change himself into a kangaroo. Traditions such as these can only be regarded as pointing back to a time when a man actually had the right to eat his own totem, when, in fact, it was the normal thing for him to do so.

At the present day the native will not eat much of his own totem. On the other hand it must be remembered (1) that he not only has no objection to other people doing so, but will actually help them to secure it by means of magic; (2) that he claims, as is clearly seen at the close of the *Intichiuma* ceremony when the members of each totemic group partake of what can only be described as a totemic sacrament, the first right to his totem; and (3) that he considers that to eat none of his totem would have just as evil effects as to eat too freely. It is essential for him to partake of the totem so as to identify himself closely with it, or else he would be unable to perform the ceremony, and the supply would vanish.

In former times apparently a man ate freely of his totem and had the first right to it. At the present day whilst the latter feature is retained the former has been changed, but it must be remembered that the one essential feature is the necessity of identifying himself closely with his totem, by, at some time or another, partaking of it. How the change was brought about which has led to the present condition it is difficult to say. Perhaps, though at best any explanation can merely take the form of a conjecture, the idea arose that too much eating of the totem would result in an estrangement between the individual and his totemic animal or plant which would prevent his adequately performing the ceremony essential for the increase of the totem. That changes in custom do arise is a matter of certainty, and it is equally certain that such changes are adopted on the initiative of one or more of the older and influential men who are heads of powerful local groups.

The hypothesis which is now suggested, and which has been advanced independently also by Mr. Frazer, is that in our Australian tribes the primary function of a totemic group is that of ensuring by magic means a supply of the object which gives its name to the totemic group, and that further, the relation between totemism and exogamy is merely a secondary feature.

In regard to the latter the traditions of the Arunta tribe point to a very definite introduction of an exogamic system long after the totemic groups were fully developed, and further, they point very clearly to the fact that the introduction was due to the deliberate action of certain ancestors. Our knowledge of the natives leads us to the opinion that it is quite possible that this really took place, and that the exogamic groups were deliberately introduced so as to regulate marital relations. By this we do not mean to imply that the regulations had anything whatever to do with the idea of what we term incest, or of any harm accruing from the union of individuals who were regarded as too nearly related. Such ideas could only arise after some system regulating marital relations had been introduced and as a result of this. The idea of incest, for example, is a perfectly

arbitrary one: what we regard as a perfectly natural and normal union, an Australian native will regard in the light of what we call an incestuous union and *vice versa*. It can only be said that far back in the early history of mankind there was felt the need of some form of organisation, and that this gradually resulted in the development of exogamic groups.

If we presuppose a tribe with certain totemic but with no exogamic groups—a condition revealed to us in the early traditions of the Arunta tribe—then any division, such as apparently has taken place in all Australian tribes, into two exogamic moieties would result in (1) placing all the members of one totemic group in one of the two moieties, or (2) in each of the latter comprising indiscriminately the members of various totemic groups. As this division of the tribe came to regulate marriage—possibly it was introduced for this purpose—it would follow that in (1) as in perhaps the majority of Australian tribes, a man of one totem was obliged to marry a woman of another, while in (2) such was not of necessity the case. When once in the case of (1) this train of reasoning had been followed up for some time, then it is not perhaps difficult to imagine that it would lead finally to the restriction of men of one totem to women of another special totem. The social aspect of the totem would thus become emphasized, and it would appear as if the totemic groups were essentially exogamic in nature, whereas, in reality, there is no primary relationship between the totemic system and exogamy.

In conclusion a few words may be added with regard to the question of soul transference in connection with the totem. Dr. Tylor<sup>1</sup> says, "The difficulty in understanding the relation of a clan of men to a species of animals or plants is met by the transmigration of souls which bridges over the gap between the two, so that the men and the animals become united by kinship and mutual alliance: an ancestor having lineal descendants among men and sharks, or men and owls, is thus the founder of a totem family, which mere increase may convert into a totem clan, already provided with its animal name. By thus finding in the world-wide doctrine of soul-transference, an actual cause producing the two collateral lines of man and beast, which constitute the necessary framework of totemism, we seem to reach at least something analogous to its real cause." Dr. Tylor then adds, illustrating the point by a reference to the Arunta system, "But considering the variations found even between neighbouring tribes in the working of their ideas, it would be incautious to lay down as yet a hard and fast scheme of their origin and development."

In the Arunta and other tribes the myth invented to account for the existing relationship between a totem clan and the totem animal or plant is that the ancestors of the former were the transformations of certain of the latter. At the same time it must be remembered that there is no idea of any such thing as the placing of the soul of a member of the totem in the totemic animal or plant, and that the life of this is not held sacred on account of the possibility of its containing the soul or spirit part of a near relative. A man will tell you that his totem is "the same thing as himself," but though he will only kill and eat it on certain

<sup>1</sup> "Remarks on Totemism," *Journ. Anthropol. Inst.*, August-November, 1898, p. 147.

special occasions, yet he will actually help a friend belonging to another totem to do so at any time.

Until we were more deeply conversant with the totemic system of the Arunta people, we were under the impression that in regard to the non-eating of the totem we were dealing with a state of affairs practically identical with the well-known often-quoted description of Grey. The two most striking facts which the native tells you with regard to his totem are (1) that the man regards his totem as the same thing as himself, and (2) that he will not kill and eat it, or only very sparingly and with reluctance. It was only at a later period when we had gained more minute information with regard to the significance of the totem as revealed in the sacred ceremonies concerned with *Intichiuma*, that we came to see more clearly the relationship between the man and his totem, and to understand that, though he regards his totemic animal as being "the same thing as himself," and that he will only on rare occasions kill and eat it, yet this by no means implies that he regards it as possibly containing the soul or spirit part of himself or of a human relative. In other tribes in which the social organisation is the same as in the tribes studied by Grey, and in which also a man will tell you that he only kills and eats his totem with reluctance, and sparingly, we find the same significance attached to the totem as in the Arunta tribe, and we venture to think that there is not sufficient evidence in regard to Australian tribes to warrant the idea that the totemic animal or plant is regarded as containing the soul or spirit part of an individual bearing the totemic name.

#### DISCUSSION.

Professor TYLOR congratulated Professor Baldwin Spencer on the success with which he had carried his zoological training into the path of Anthropology. A zoologist, he remarked, is half an anthropologist from the beginning. Among the novel and important information which Professor Baldwin Spencer had brought back from his exploration, his account of the native totem-system had, even in anticipation of the publication of the Spencer and Gillen volume on *The Native Tribes of Central Australia*, aroused lively interest among anthropologists. The interpretation of the Arunta totems as resulting from soul-transmission carried on through sacred objects is not only intelligible, but is perhaps the only clearly formulated scheme of totemism yet described, which is intelligible at every step on savage animistic principles. In this it differs remarkably from most other totem-systems such as that of the Algonquins of America, in which the relation of the man to the totem-animal of his clan is obscure, probably because most foreigners who have described it have failed to ascertain the spiritual connexion involved. An important feature in the Arunta-totems is their agreement with Wilken's theory, which traces them to the doctrine of transmigration of souls. So remarkable a new element thrown into the midst of the older accounts in Australia, America, and other countries, should be a warning against the premature framing of theories as to the origin of totems by anthropologists, especially in the absence of full comparison of evidence as to the animistic ideas connected with them.

OBSERVATIONS ON CENTRAL AUSTRALIAN TOTEMISM.<sup>1</sup>

BY J. G. FRAZER, M.A.

I DESIRE to bear my testimony to the extreme importance of the new anthropological facts collected by Professor Spencer and his colleague Mr. Gillen among the natives of Central Australia. It has been my privilege to read their forthcoming work in proof, and I cannot but regard it as one of the most valuable contributions ever made to the early history of mankind. Let me give very briefly my reasons for thinking so. We all know that of the great land masses or continents of the world Australia is at once the smallest and the most isolated, and that consequently the plants and animals of Australia are in general of a less developed and more archaic type than those of the other continents. For similar reasons man in Australia remained on the whole down to recent times in a more primitive social and intellectual state than elsewhere. In the struggle for existence progress depends mainly on competition; the more numerous the competitors, the fiercer is the competition, and the more rapid consequently is evolution. In Australia the smaller area of the continent combined with its physical features, notably the arid and desert nature of a large part of the country, has always restricted population and retarded progress. This holds especially true of the central area, which is not only shut off by its position from the outer world, but is also isolated by natural barriers from the rest of Australia. Here then, if anywhere, is the ideal field for the anthropologist who desires to study man in the lowest stage of culture now accessible to us on the globe; and when the book of Messrs. Spencer and Gillen is before the world, I think it will be admitted that in them we have got the ideal men for the work. The long and intimate familiarity of the one with the natives, and the trained scientific powers of the other, make up a combination of talent which in anthropological research, so far as my knowledge goes, has never been surpassed. By their labour and skill they have rescued for all future time a document of priceless value for the understanding of the evolution of human thought and society, a document which but for their enthusiastic devotion to the cause of science must almost inevitably have perished beyond recall. If we in this generation owe a debt of gratitude to Tacitus for his somewhat meagre sketch of our German forefathers, with how much deeper gratitude will not posterity in ages to come look back to Spencer and Gillen for their incomparably fuller and more accurate description of a people who stand at the present day far nearer in point of culture to the beginnings of our race than the Germans did in the time of Tacitus? In immortalizing the

<sup>1</sup> Read at the meeting of the Anthropological Institute held 14th December, 1898. A few passages of the paper were omitted in the reading for the sake of brevity.

native tribes of Central Australia, Spencer and Gillen have at the same time immortalised themselves.

Now I should like to say something about that part of Professor Spencer's paper which interests me most, I mean the part dealing with the origin of totemism. With his general conclusion, so far as it relates to the Central Australian tribes, I am in agreement, indeed I drew the same inference from the facts in September last before I became aware that my friend Professor Spencer, as I hope he will allow me to call him, had done so before me. A conclusion which two minds have reached independently from a consideration of the same facts can hardly be a very forced or unnatural one. What then is that conclusion? If we are right, the key to the totemism of the Central Australian natives is furnished by the *Intichiuma* ceremonies of which you have heard to-night. In its origin totemism was, on our theory, simply an organised and co-operative system of magic devised to secure for the members of the community on the one hand a plentiful supply of all the natural commodities of which they stood in need, and, on the other hand, immunity from all the perils and dangers to which man is exposed in his struggle with nature. Each totem group was charged with the superintendence and control of the particular department of nature from which it took its name. Men of the Kangaroo-totem had to see to it that there was abundance of kangaroos, and that the animals were duly killed to furnish the community with kangaroo flesh. Men of the Grass-seed totem had to take care that a plentiful supply of grass-seed grew and was gathered for food. Men of the Water-totem were bound to make rain whenever it was needed; men of the Sun-totem had probably (though of this, I think, Professor Spencer has not yet found definite evidence) to cause the sun to rise and set and to give his light and heat in due season. The means adopted by each totem group in the discharge of its special functions were neither religious nor scientific, but purely magical, so far at least as the multiplication of the totems was concerned. To multiply kangaroos the men of the Kangaroo-totem neither prayed to a deity nor domesticated and bred the animals; they poured blood on a stone which was believed to be haunted by the spirits of kangaroos, and by so doing they fancied that they compelled the spirits to go out and be born into kangaroo bodies. The men of the Witchetty-Grub-totem mimicked the process by which the insect emerges from the chrysalis state, and by this mimicry they believed that they increased the supply of the grub. And similarly with the other totem groups. Each group was a band of magicians working by means of spells and enchantments for the general good of the community.

Such is the view of the purpose and meaning of totemism which seems to emerge from the discoveries made by Spencer and Gillen. How does it square with our old notions on the subject? Hitherto we have supposed that there were two canons of totemism, first the rule not to kill and eat the totem animal and plant, and second the rule not to marry a woman of the same totem group. The second of these rules does not apply to some of the Central Australian tribes at all: a man is just as free to marry a woman of his own totem as of any other.

And not only so, but the traditions of the tribes, which we have good grounds for regarding as authentic, point clearly to a time when men married regularly and by preference the women of their own totem groups.

Then as to the second supposed canon of totemism, the rule, namely, that a man must not kill and eat his own totem animal, it is in general observed, except on certain special occasions, by the Central Australian natives at the present day; but their traditions point very plainly to a time when men were free, and indeed had a prior right, to kill and eat their totem animals. Thus if we follow the traditions of the Central Australian natives, which bear the stamp of authenticity, we are led back to an early stage in the history of totemism when men regularly killed and ate their totem animals, and regularly married women of their own totem groups. If this was so, the old canons of totemism must be given up, at least so far as the Central Australian tribes are concerned. And one of the advantages of the new theory of totemism is that it is perfectly reconcilable with such a state of totemism as is depicted for us in the Central Australian traditions. If the totem group is essentially a band of magicians charged with the superintendence and control of a particular department of nature, there seems at first sight no reason why they should not kill and eat their totem animals and marry women of their own totem group. Indeed, since one of their leading principles is the identification of themselves with the totem animal, it seems natural that they should eat of the animal in order to make themselves of one flesh and blood with it, and that they should marry women of the same totem, a Kangaroo man mating with a Kangaroo woman, just as a kangaroo mates with a kangaroo, an emu with an emu, and so on.

But if we start, as we seem bound to do, with a state of totemism in Central Australia in which men regularly killed and ate their totem animals, and married women of their own totem group, two questions have to be answered. First, why was it that in course of time men refused to kill and eat their totems? And second, why was it that in some, though not all of the tribes, men came in time to refuse to marry women of the same totem? First, as to the prohibition to kill and eat the totem. We may conjecture that this taboo originated in an attempt to carry out more consistently that principle of the identification of the man with the totem which seems to be of the essence of totemism. As a rule, animals do not live upon their own kind; hence, for example, if an emu man regularly kills and eats emus, which he professes to regard as practically identical with himself, the other emus will distrust and avoid him; they will see that he is only a sham emu after all; he will no longer possess their confidence; and his power over them will be gone. Thus in order to retain his influence over the emus, it is essential that he should simulate a close friendship for them, not alienate their sympathies and excite their alarm by knocking an emu on the head and devouring its flesh whenever he gets the chance. Hence, I conjecture, arose the taboo on killing and eating the totem animal. This self-denying ordinance perhaps cost the members of the totem groups less than might at first sight be supposed; for the

members of each group probably calculated on the total increase of the food supply likely to follow from the enforcement of the same ordinance on all the other totem groups. For it must be remembered that in totem society the various totem groups do not live isolated from each other; they are mixed up together, and exert their magical powers for the common good. Under the original system, if we are right, the Kangaroo men made and killed kangaroos for the benefit of all the other totem groups as well as their own; and so with men of the Witchetty-Grub totem, the Eagle-hawk totem, and the rest. Under the new system, by which men were forbidden to kill and eat animals of their own totem, the Kangaroo men continued to make kangaroos, but not for their own consumption; the Emu men continued to multiply emus, though they might no longer partake of emu flesh themselves; the Witchetty-Grub men still wrought their enchantments for the propagation of witchetty grubs, though the dainty food was now destined for other stomachs than their own. But each group consoled itself for its self-denial in not eating of its own totem animal or plant, by reflecting how much more abundant than before would now be the supply of all the other animals and plants of which it was free to partake. The Kangaroo man, no longer at liberty to feast on kangaroo, would count on more copious meals of emu, wallaby, witchetty grubs, grass-seeds, and so on; and so, *mutatis mutandis*, with the members of all the other totem groups.

To the new rule that a man might not eat of his own totem, one very important exception was made. At certain times he was and is still bound among the Central Australian tribes to partake of a little of the totem animal or plant as a solemn ceremony. Without this it is believed that he could not perform the magic ceremonies necessary for the multiplication of the totem animals or plants. He could not be a Kangaroo man and make kangaroos unless he had in his own body the flesh and blood of a kangaroo; he could not be a Grass-seed man and make grass-seeds unless his corporeal substance were at least in part composed of grass-seeds; and so with the members of the other totem group. Here, it is plain, we have at last the long-sought totem sacrament which Robertson Smith with the intuition of genius divined, and which it has been reserved for Messrs. Spencer and Gillen to discover as an actually existing institution among true totem tribes.

The second question which the new theory of totemism has to face, is this: why did men come in time to renounce the right of marriage with women of their own totem? This question is far more difficult to answer than the former; indeed a complete and satisfactory answer cannot be given until we have solved that wider and deeper problem of the origin of exogamy in general which has hitherto baffled anthropologists. Still without probing the depths of this central mystery of social life, I think we can see how, when the principle of exogamy came into operation, it may have been applied to the already existing totem groups. In Australia, Melanesia, and North America, we have almost indubitable evidence of the bisection of a community into two exogamous classes, each of which in some tribes has been again bisected into two exogamous sub-classes. Amongst the Central Australian

tribes we have the clearest traditionary evidence that this system of exogamous classes and sub-classes was superposed on a previously \*existing system of non-exogamous totem groups. If, when the bisection of the community first took place, the existing totem groups were arranged, as they naturally would be, some in one of the two new classes and the rest in the other, the exogamy of the totem groups would follow *ipso facto*. But, of course, this conjectural explanation of the application of exogamy to the totem groups does not touch the question of the origin of exogamy itself.

Thus far I have confined my remarks mainly to the totemism of the Central Australian tribes, the remarkable features of which have just been disclosed to us by the memorable researches of Messrs. Spencer and Gillen. But the question naturally presents itself: Will the same explanation which we have given of Central Australian totemism apply to totemism in other parts of the world, as in America and Africa? To this I would reply that so far as we can see at present there are no facts which seriously conflict with the new theory, and there are some which positively support it. Let me remind you that on the new hypothesis the key to totemism is furnished by the *Intichiuma* ceremonies, that is the magical ceremonies performed by the totem groups for the purpose of controlling and directing the various departments of nature for the good of man. A crucial question, therefore, is: Do we find analogous ceremonies performed by totem groups in other parts of the world than Australia? And in general do we find that elsewhere than in Australia, members of a totem clan are credited with the power of exercising special control over the totem? The answer to both questions is that we do. In one of the Torres Straits Islands, for example, members of the Dog clan were believed to understand the habits of dogs and to be able to exercise special control over them.<sup>1</sup> In one of the New Hebrides, when a man wished to catch octopus, he used to take one of the members of the Octopus family with him; the latter stood on the beach and called out, "So-and-so wants octopus," and then plenty of octopuses would come and be caught.<sup>2</sup> On a cloudy morning the Sun clan of the Bechuanas were wont to perform a ceremony to make the sun shine out through the clouds; the chief kindled a new fire in his dwelling, and every one of his subjects carried a light from it to his own hut.<sup>3</sup> The intention of the ceremony clearly was by means of sympathetic magic to blow up into a brighter blaze the smouldering fire of the sun. In the Murray Islands, Torres Straits, it is the duty of the Sun clan to imitate the rising and setting of the sun,<sup>4</sup> probably to ensure the punctual performance of his daily duties by the great luminary. Among the Omahas of North America the Small Bird clan performs a magic ceremony to keep small birds from the crop; the Reptile clan performs a similar ceremony to protect the crops from worms; and the Wind clan think they can start a breeze by flapping

<sup>1</sup> A. C. Haddon, in *Journ. Anthropol. Inst.*, xix, pp. 325, 393.

<sup>2</sup> Codrington, *Melanesians*, p. 26.

<sup>3</sup> Arbousset et Daumas, *Voyage d'Exploration*, p. 350 sq.

<sup>4</sup> A. E. Hunt, in *Journ. Anthropol. Inst.*, xxviii, p. 6.

their blankets.<sup>1</sup> The same Wind clan practises a magic ceremony to stop a blizzard. They paint one of their boys red, and he rolls over and over in the snow, reddening it for some distance all around him.<sup>2</sup> This stops the blizzard, the notion apparently being that the white snow will not fall when it knows that it will be thus reddened and defiled. In another North American tribe the power of causing the snow to stop falling would seem to have been claimed and exercised by men of the Snow totem.<sup>3</sup> Some of the examples which I have just cited explain the attitude of the totem clan towards their totem, when the totem is of a noxious and maleficent nature. In such cases it is the function of the clan, not of course to multiply the numbers of the totem or increase its virulence, but on the contrary to disarm, counteract, and keep within due bounds its dangerous influence. Hence, members of the Serpent clan in Senegambia profess to treat, by their touch, persons who have been bitten by serpents<sup>4</sup>; and the same profession was made by Serpent clans in classical antiquity.<sup>5</sup> Similarly in Central Australia members of the Fly totem claim to cure, by the touch of a magic implement, eyes which are swollen with fly-bites. And on analogy we may conjecture that certain Arab families who believed their blood to be a remedy for hydrophobia<sup>6</sup> were descended from men of a Dog totem.

These instances seem to show that the principles which have moulded totemism in Central Australia have worked also to produce the same result in other parts of the world. It would be premature to say that the momentous discoveries of Messrs. Spencer and Gillen have finally solved the problem of totemism; but at least they point to a solution more complete and satisfactory than any that has hitherto been offered.

<sup>1</sup> J. Owen Dorsey, in *Third Annual Report of the Bureau of Ethnology* (Washington), pp. 238 sq., 241, 248.

<sup>2</sup> J. Owen Dorsey, in *Eleventh Annual Report of the Bureau of Ethnology* (Washington), p. 410 sq.

<sup>3</sup> *Relations des Jesuites*, 1667, p. 19 (of the Canadian reprint); *Lettres Edifiantes*, vi, p. 169 sq.

<sup>4</sup> *Revue d'Ethnographie*, iii, p. 396.

<sup>5</sup> Strabo, xiii, 1, 14; Pliny, *Nat. Hist.*, xxviii, 30.

<sup>6</sup> W. Robertson Smith, *Religion of the Semites*, New Edition, London, 1894, p. 369.

ORDINARY MEETING.

JANUARY 10TH, 1899.

F. W. RUDLER, Esq., F.G.S., *President*, in the Chair.

The Minutes of the last Meeting were read and signed.

The election of Col. Sir THOMAS H. HOLDICH, K.C.I.E., C.B., and Sir GEORGE SCOTT ROBERTSON, K.C.S.I., as Fellows of the Institute, was announced.

The PRESIDENT nominated Mr. J. WALHOUSE and the Rev. H. N. HUTCHINSON as auditors of the last year's accounts.

The PRESIDENT introduced Mr. F. W. CHRISTIAN, who had lately returned from the Caroline Islands; Mr. CHRISTIAN then read his paper:—"On Micronesian Weapons, Dress, Implements, etc.," which was well illustrated by lantern slides and by an interesting exhibition of objects brought home by himself.

A discussion ensued, in which Mr. GOWLAND and Mr. READ questioned the lecturer's views as to Japanese influence being apparent in the islands; Mr. BALFOUR pointed out the great advantage of an explorer bringing home the actual objects used by the natives; and Dr. GARSON described the differences in the skulls exhibited.

The PRESIDENT closed the discussion by a vote of thanks to Mr. Christian for his interesting paper, which was carried unanimously.

## ON MICRONESIAN WEAPONS, DRESS, IMPLEMENTS, ETC.

BY F. W. CHRISTIAN, B.A., F.R.G.S.

[WITH PLATES XIX TO XXIV.]

IF you will take a chart of the Central Pacific and look along a little north of the equatorial line above the great island continent of New Guinea, you will see a number of islands and islets, styled the Carolines, dotted over the ocean like little pieces upon a gigantic chess-board, stretching about 1,400 miles from east to west, bounded on the west by the Pelews, the north-west by the Ladrões and Mariannes, and to the east and north-east by the double chain of the Raliks and Radaks, which geographers call the Marshall Group. It is with the inner life and history and folk-lore of this interesting people of the Caroline Group that we have to deal to-night. A strange, apathetic folk, with all the Malay naïveté and, alas! some of the Malay treachery—in a word, endowed with all the strange power and strength and the equally strange weaknesses and limitations of the Malay, whom we English are just beginning to understand. The nature of the Caroline islanders supplies a very remarkable link between the sullen Melanesian and his blithe brother the Tahitian—the brightest and most characteristic example of a Malay turned Polynesian. I am only here touching the very fringe of a charmed region in archæology only dimly indicating rare and curious specimens out of a human museum that only too surely will be open for only a limited time; for the peoples of the sea-girt lands are fast dying out from the domain of their forefathers. So I ask you to-night to bear with me awhile and listen patiently to fragmentary narrations, culled from the desultory annals of a forgotten folk—fragments themselves of an ancient people, bold and enterprising as the Phœnicians of the Mediterranean or the famed vikings of the Northern Seas.

## PONAPE.

Ponape is the largest and most important of the Eastern Carolines. It takes its native name Ponu-pei (West Carolines, *Fanu-Pei*) from some remarkable Cyclopean ruins existing near Metalanim harbour on the east coast. The island has an area of some 340 square miles, and is surrounded by an extensive barrier reef enclosing a wide lagoon in which lie scattered a number of small islets—mostly uninhabited—and used by the natives merely as fishing stations. The interior is an impenetrable jungle, divided into ravines and deep valleys, which are bounded



HOUSE AT CHAKAR-EN-YAP, RONKITI RIVER.





RUINS AT NAN-TAUACH, WITH METALANIM NATIVES.





FIG. 1.—ENTRANCE TO SANCTUARY, NAN-TAUACH.



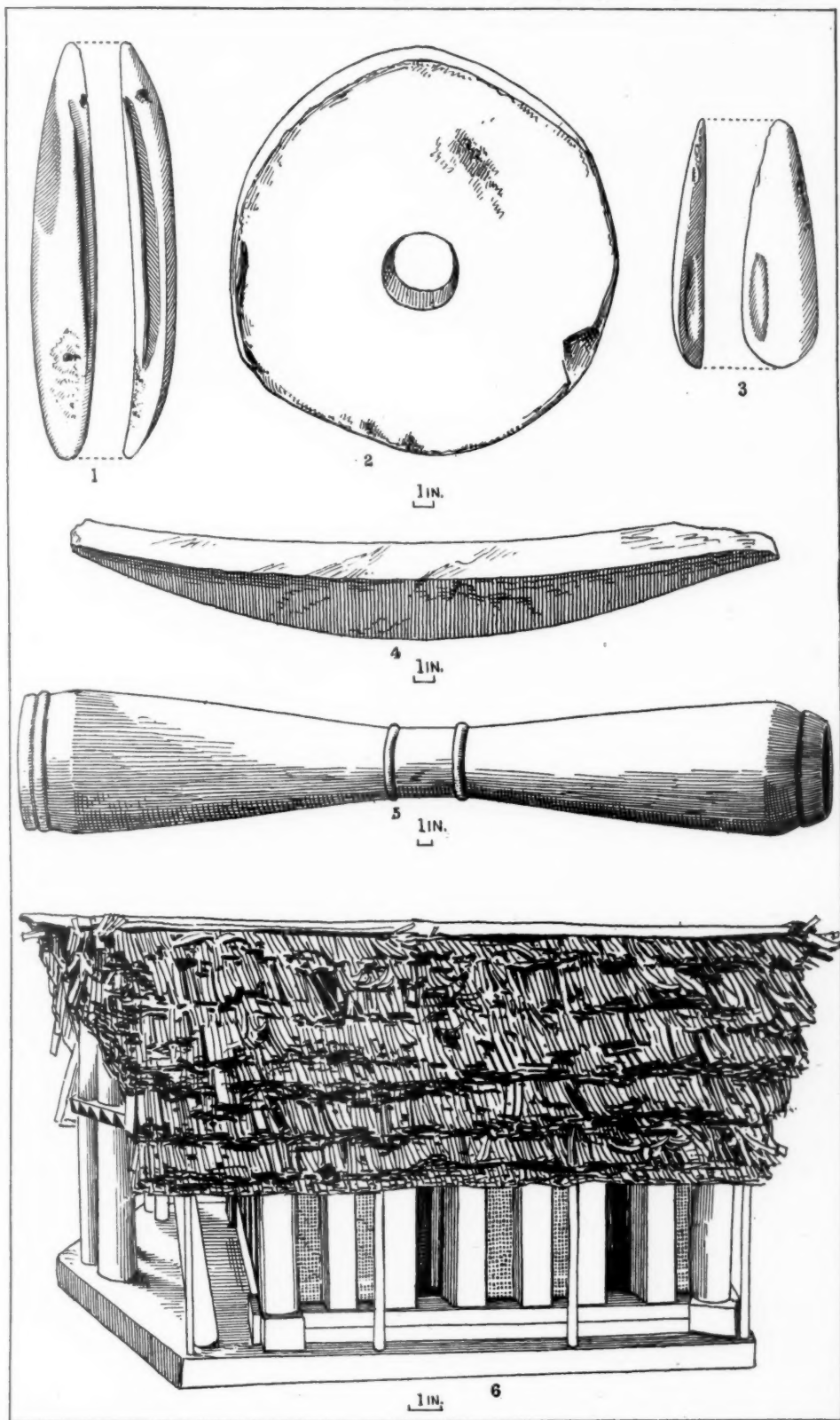
FIG. 2.—NATIVES OF PALIKER, N.W. PONAPE.





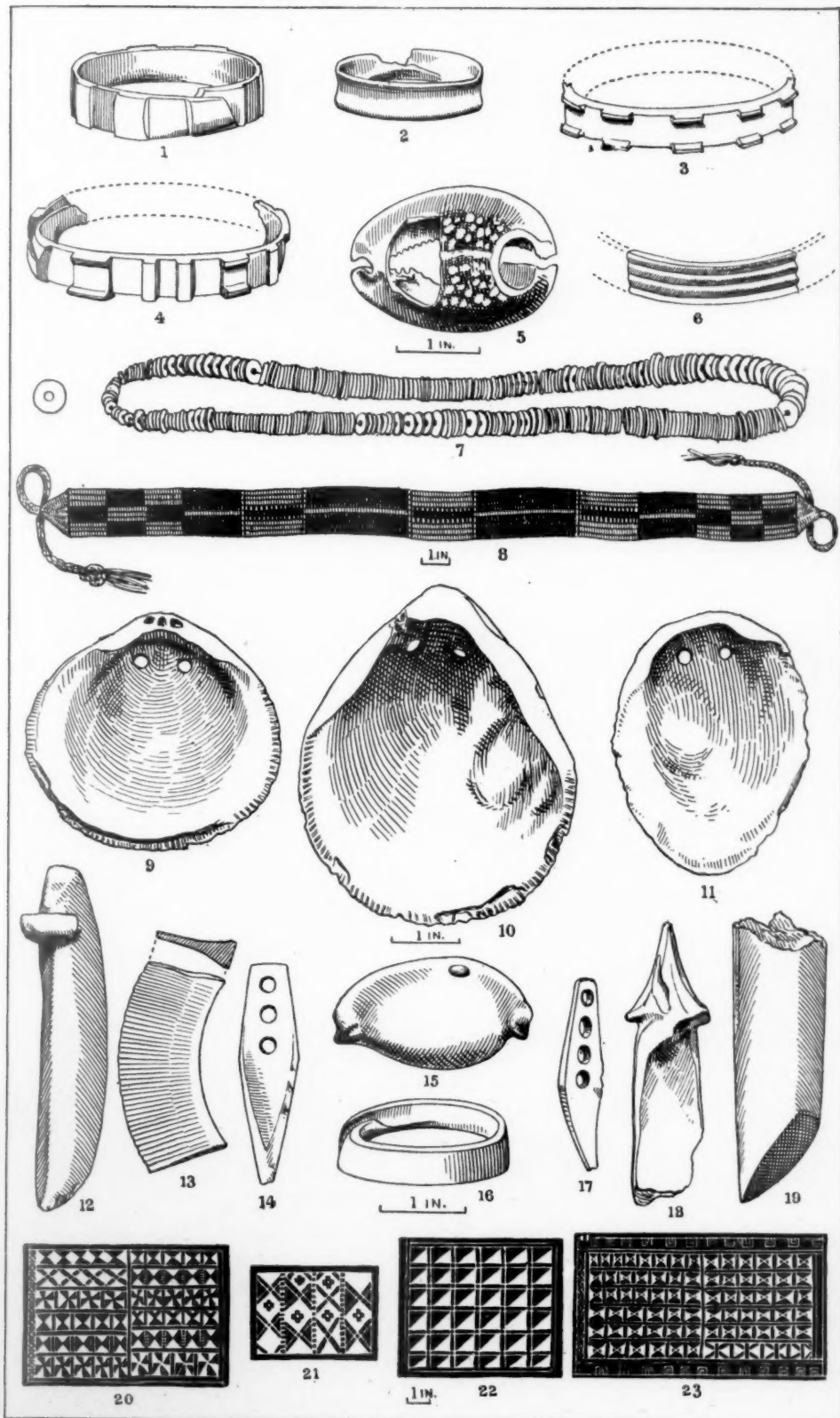
WOMEN AND CHILDREN, METALINIM TRIBE, PONAPE.





OBJECTS FROM THE CAROLINE ISLANDS.





OBJECTS FROM THE CAROLINE ISLANDS.



by hanging woods. Ponape has a population of some 5,000, divided among five *wci*, or tribes.

The natives are a branch of the widely spread Malay family and akin to the wild tribes of East Formosa and the Dyaks of Borneo, and have much in common with the people of the Marianne or Ladrões, the Visayas of the South and the Tagala and Pampang folk of the North Philippines. They have traces of a primitive Negrito strain, and there is also much to connect them with the Melanesians of the New Hebrides, the Solomon Islands and the Banks Islands to the southward. They have absorbed many Polynesian elements from the great waves of migration sweeping outwards and eastwards from the Malay Archipelago and Indonesia some thousand years ago; Mongolian traders and pirates have also contributed to this strange race medley. The Ponapeans are hardy and intrepid warriors and navigators, most expert fishermen, but surprisingly poor tillers of the soil. They have something of the Malay apathy and something, too, of the Malay sullenness and revengefulness. For the rest, they have a great turn for intrigue and chicanery and a very pretty talent for knavery. The Ponapean is a crafty and bitter foe, but very sincere in his friendship and most cordial in his hospitality to those who win his good-will.

#### *Dress and Adornments.*

The dress of the men when worn at work was a narrow girdle "*Uaiwai-lol*," about a foot in breadth and some four feet in length, exactly the same as formerly worn in Japan, made of the woven fibre of the banana or Niu tree, often dyed yellow from the *Morinda citrifolia*—going once round the waist, down between the thighs and tucked in behind at the back so as to leave a piece depending like a tail. (It is the *Hume* of the Marquesas, the *Malo* of Hawaii, Samoan and Fiji [*cf.* Bisaya, *Baro*, a woman's frock], the *Maro* of Tahiti, Mangareva and Maori, and the *Palpal* of the Mortlock Islands). The dress worn on occasions of festival or after-work was the *Kol* (that of a chief in the language of ceremony was called *Mol*) or native kilt, composed of the split filaments of young coconut leaflets (the pinnæ of the branch) steamed in the oven, steeped a day or two in water under heavy stones, scraped with cockle-shells, and often they were dyed bright yellow with turmeric or with the juice of the bark of the *Morinda citrifolia* or Flame Tree. A new *Kol* is a pretty sight, but exposure to the sun quickly makes the bright hues fade out. Sometimes with the cockle-shell, each frond would be carefully pinched and creased into wavy lines, the work of the old women. This was a *Kolikoch*. The working dress was called "*Likau-mal*," and their regular dress for festivals or leisure *Kaput* or *Kapot*. The chiefs and men of note in the community used to wear belts of banana fibre (*Tor* : *Tur*) elaborately woven out of banana fibre, on which was strung rows of pink, white and grey shell beads. These were of two designs and varying sizes, one resembling in shape the Maori *hei-tikis*, or pendants of greenstone called *Pake* or *Puake*—the other round which they call *Pul*. This is very similar to the *wampum* or shell bead-ornaments

which form the coinage of many of the North American tribes. For a common man to put on the belt of a chief was a serious offence in Ponape as in Hawaii, in which latter country the penalty was death. (Cf. the old distich, "Ina hume ke kanakai ko ke alii malo e make noia." "If a person should bind on a chief's girdle, he shall die for it.") Carved and plain shell bracelets were also the fashion (*Luot-en-Matup*) from the place of their manufacture. A wise woman named *Kamai* is said to have invented them. The same word is applied to a ring of turtle-shell as far as Yap. (Possibly the word is the *Lio* or *Liko* of Polynesia, and equal to a hoop or circle.) Ear-rings of turtle-shell (*Kichin-pot*) were sometimes worn, but the Ponapeans did not pull down and distort the lower lobe of the ear as do the Mortlock Islanders and the primitive people on Easter Island (*Rafa-nui*), destroyed by a Polynesian under Hotu-Matua about 1200 A.D., styled by their conquerors the *Turinga-Roroo* or Long Ears. A similar custom prevailed amongst the early Bisayas in the Southern Philippines, and the Spanish chroniclers of the Conquest of Peru remark upon it as a fashion of the early Inca nobles.

The dress of the women was called *Li-kau* or *Li-kau-tei* (*Kau*—clothing, Polynesian *Ahu* or *Kahu*), a wide deep girdle depending as far as the knees, woven from the bark of the *Nin*, a common forest tree of the ficoid order. Native cloth made from the Paper Mulberry bark—the *tapa* or *siapo* or *Ngatu* of Polynesia—does not appear to have been known to the Ponapeans. Necklaces of shells and flowers were much in use, likewise garlands of the fragrant *Gardenia* and *Cananga odorata*, either of which are styled indifferently *Pur-en-uai* or *Chair-en-uai*, "*The Foreign Flower*." Wreaths of polypody fern and various aromatic herbs and grasses were greatly in favour. Dancers, male and female, were fond of wearing fillets of banana leaf, dracæna (*Ting*) and cocoanut leaflets. These last they would wind round their fingers so that the tips projected above the knuckles, with which they produced a rattling, whirring effect in the choruses. These they styled *Anichinich*.

*Hats*.—Made of pandanus leaf, helmet fashion, with projecting peak—used by fishermen on the reef—called on Ponape *Li-chorrop*, on Kusaie *Surafrac*, on Yap (where they assume the peaked shape as worn by Chinese coolies and fishermen) *Ruatch*. Of late years the people of Pingelap and Kusaie are famous for their clever workmanship in plaiting broad low sailors' hats on the European design.

*Tools and Implements*.—The raw material for their textile operations were: (1) the inner fibres of the banana, the *Basho-fu* of the Japanese; (2) the bark of the *Nin*, a tree of the ficoid order used in making a coarse sort of native cloth; (3) the bark of the *Kalau* (*Kala-hau*), the *Fau* or *Hau* of the Polynesians. The Ponapean name means the *Au*, from which *Kal* or string is made. It is the *Gili-fau* of the Mortlock Islanders, whose dialect has preserved so many South Polynesian forms. Strips of the bark of this tree whilst fresh are as tenacious as the green withes with which Samson was bound. This valuable substitute for Manila hemp is called *Tip-en-kalav*. The third indispensable material is the *Tipanit* or cocoanut fibre, obtained after sinking the husks a few days in the sand

about high-water mark. Each tiny strand is laboriously twisted end on end between the deft fingers and thumbs of the old men until a surprisingly strong string, cord or rope is formed, the thickness varying according to the fancy of the plaiter or weaver. This is the far-famed cinnet cord so extensively used in Pacific waters for lashing cross-beams and posts into place in house-building, and as a substitute for nails in keeping the framework and delicate cross-pieces of the outrigger in place in the building of their canoes. This material the Ponapeans call variously *Puel* and *Kichin-mot*.

The natives used to be very adept in constructing all manner of traps and snares out of the pliant strips of hibiscus. The nooses they used in snaring birds and wild pigs. These they called *Letip* or *Litip*, which, being interpreted, means a *woman's deceit*. Other kinds of traps they called *Katikatia-mau*, which word in plain English signifies a *good device*. Nowadays this name is admiringly applied to those elegant instruments of torture sold by the traders and known as gins or tooth-traps, for the capture of the rat and the *mus ridiculus*, with whom the native is at endless feud. The primitive rat-trap was made of slips of reedgrass or fine cane, and the central ribs of cocoanut leaflets formed the *Kachik* or spring. The bait consisted of a lump of *Mar* or fermented breadfruit, whilst a heavy piece of rock was laid so as to fall upon and crush the intruder directly the spring was touched. In Yap they call this trap *Bildil*. Now and then, but rarely, there is to be seen a cage (*Pachapach*) made of slips of hibiscus wood cunningly joined together, in which sits a disconsolate-looking bird. The modern Ponapean, whatever his ancestors of a remoter day did, does not trouble his head much about taming birds—a pretty trait, by the by, in the character of his southern cousin the Samoan. However, one may see sometimes in a Ponapean hut a ridiculously-tame blue heron (*Kawalik*) or a pretty black-and-white seabird called *Chik*—children's pets. Their matter-of-fact elders, knowing the trouble in times of scarcity of filling hungry mouths, are hardly likely to let childish sentiment interfere with the just claims of the larder.

*Fish-hooks and Fishing.*—*Kach*—the hook of wood or bone, the body of mother-of-pearl (*pai*)—the glitter of which as in Tahiti attracts the fish, like the bright metal spinner used for trolling for pike in the English meres and the lakes of Scotland and Switzerland. The metal fish-hooks of varying size which the traders have introduced are greatly in request. The Ponapean is a most keen fisherman. One skilled in this art is always assured of a goodly alliance in marriage, to which his resourcefulness as a food-provider entitles him.

For bait they use bits of squid or cuttle-fish (*Kich*) or else the bodies of hapless hermit-crabs (*Umpa*) torn from their snail-shell homes. They frequently use bundles of *Up* root for stupefying fish in the pools. When crushed up, these roots exude a milky juice of a most powerful narcotic property, and the fish are soon floating about helpless. The larger *Muraenas* or sea-eels are the last to succumb, and finally writhe upwards out of the deeper and remoter holes in a stupid and comatose condition. The *Up* is a creeper much resembling the *Wistaria*.

The Kusaian call the plant *Op* (cf. the Malays *Ipoh* and *Upas*—poison tree). The latter name is the Javanese form, around which so many absurd legends have been woven. The Malay name for the *Up* plant itself is *Tuba*. Hence the phrase "*Men-uba ikan*," "to catch fish by stupefying with *Tuba*."

*Nets.*—

*Uk.*—The generic term for nets in general.

*Uk-alap.*—Large stake-net or seine-net, used for catching turtle and big fish (some 20 fathoms long by 5 in depth).

*Uk-c-tik.*—A small seine-net.

*Chakichak.*—A small casting net used for fishing on the edge of the reef just above the deep water.

*Naik.*—A hand-net, rim-shaped like a bow. Used for scooping up fish driven down a narrow pass or ditch in the coral reef.

*Lukuk*: *Lukouk.*—A hand-net used for catching small fish.

*Liem.*—A bag-net used at openings of weir or passage at the beginning of ebb-tides generally four days after full moon.

*Macha* (Polynesian *Mata*) is the word used for the *Mesh* of the net.

A fish-pen or weir of stone is called *Mae*, one of cane or reeds *Ilu*.

In Yap *Thagal* is a cane weir; *Acch* or *Etch*, a stone weir.

*Maot*, a fish-pond.

*Household Implements, etc.*—Ponapeans style them all "*Kapua kai*."

*Mats.*—

- (1) *Loch* is the mat of the country. Its peculiar Japanese-like design may be seen from a photo exhibited. It is sewn together, not plaited, made of the leaves of a species of pandanus (*Kipar*) which answers to the *Raufara* of Tahiti, the *Rau-ara* of Rarotonga, and the *Lauhala* of Hawaii. Length generally about 7 feet, breadth about 5. The Paliker district is noted for its manufacture of these mats, which cost from six to eight Spanish dollars apiece. The *Loch* of a great tribal chief or prince is called "*Parror*" in the language of ceremony.
- (2) *Li-rrop* or woman's *Rrop* is the name applied to mats of foreign make and pattern, such as those from Pingelap, Strong's Island and the Marshall Islands, many of them very ornamental in design. The name itself seems to be a foreign word (cf. Yap, *Tsop*: *Trop*; Gilbert Islands, *Roba*; Pingelap, *Rop*).
- (3) *Teinai*, coarse mats plaited from cocoanut leaves. The article and its name alike borrowed from the Gilbert Group, as also the rough baskets of the same material known as *Onoto*.
- (4) *Kie*: *Kiei*, sleeping mats, made of finely-woven pandanus. Derived from the Mortlocks (cf. Polynesian *Kiekie*, a species of pandanus used as a textile fabric; and Kusaian *Kiaki*, a mat).

*Mosquito Screen.*—*Tei'-amu-ché*: the *tau-namu* of Nuku-Oro and the *Tai-namu* of the South-Western Pacific. The Ponapean mosquito screen, before the introduc-

tion of gauze and linen, is said to have been composed of a cloth made out of the bark of the *Nin* tree. The Paper Mulberry, from which the *tapa*, or *siapo* or native cloth of South Western Polynesia, is not used in Ponape although it does occur sparsely.

*Pillow.*—*Ulul*: *Ulunga*: the *Alunga* of South Western Polynesia, either made of bamboo or of a log of wood, a length of the trunk of a tree-fern or pandanus tree, are frequently used for this purpose, for the Ponapeans are a hardy, vigorous folk, and care not much for soft lying and sumptuous fare.

*Baskets.*—*Kiam*, a long flat basket or tray, plaisted, roughly, of cocoanut fronds split down the middle and interlaced in a diamond pattern.

*Kopo.*—A circular basket of varying depth made of the same material.

*Kop-en-lait.*—A fisherman's basket, somewhat larger than the above.

*Ooto.*—A large, coarsely plaited fish-basket—a Gilbert Island word.

*Paikini.*—Some thirty or forty of the above *Kiam* or flat trays fastened together end on end so as to form one long tray. This is heaped with food and carried in solemn procession by about twenty men in the festivals celebrated in honour of a plentiful season. It is laid down on the grass and a band of men approach with shell-axes on shoulder with which they sever the strips of "*Kalan*" bark which bind the component "*kiam*" together. Then the food is apportioned, the Choko or Kava is brewed, the ancestral spirits are invoked, and the people fall to serious business tooth and nail.

*Fan Ta-n-ir*, i.e., *Thing for fanning.*—A fan made of pandanus or cocoanut leaves. Those intended for fanning up the embers are clumsy in make, but those designed for personal use are much more neat in finish, and resemble the Marquesas very closely.

*Et* (Maori *Kete*: Samoan and Tahitian *Ete*).—A netted bag of *Nin* or *Kalau* fibre.

*Combs.*—*Rotom* or *Rokom*: Like those of Yap, made out of the wood of the Koto or white mangrove—and of similar design. Now scarcely ever seen, and the name is now applied to the guttapercha and celluloid and tortoise-shell combs supplied by the ever-active trader.

For *Bottles* they use the hollowed circular fruits of the *Pulel*, *Felak* and *Ichak* plants, which belong to the Calabash family. The gourds are strung together by fives and sixes with cinnet. They use the large ones for storing drinking water, the smaller for the various scented oils—in which native fancy so strongly delights.

*Cooking Utensils.*—It is the old Indian word *Thal*: *Thaliya*: *Chaliya*: *Tal* (on Ngatik *Thal*), a survival from some remote era of crockery ware in South or Central Asia—denotes a wooden dish or platter or a cocoanut cup. *Chapi* is another name given to vessels of wood. The latter word occurs in the Mortlock *Sepei*, Marshall Islands *Chebi*, Gilbert Islands *Tabo*, Pelews *Theb*. In the Mariannes *Tape* denotes an earthen pot, the Yap equivalent being *Thab*, *Thib* or *Tib*. The occurrence of this common word over so wide an area points unmistakably to the gradual substitution of wooden for earthen vessels in Micronesia, owing

to the industry of pottery-making falling out of use—in certain spots where no suitable clay or kaolin was available. It is rather astonishing to see the art of pottery-making lost in a good-sized and well-settled island like Ponape, and retained in a small spot like Yap. A curious fact illustrating the same lost industry was pointed out by the Rev. Lawes of Port Moresby in British New Guinea, in the preface to his useful vocabulary on the Motu dialect, in which the word "*Tunua*," which in South, West and East Polynesian means "*to cook by broiling or roasting*" is used in a special sense for the *baking of pottery*. The white man's ironpot is supplanting everywhere the earthen vessels of Micronesia, where the primitive industry is yet preserved. The "*ainpot*" is to be found in most Ponapean households and embraces a variety of uses, being alternately used for making huge brews of black tea and boiling quantities of yam and cocoanut milk, the result being frequently a weird blending of different flavours on the plate of the European who drops in by chance to *pot-luck*.

The *Um* or earth-oven, where the raw food is steamed (*cf.* Motu *Amu*, the *Umu* of South West Pacific lands), has too often been described by travellers to need detailed notice here. Cooking underground is the general mode in Ponape, although fish are frequently broiled on the glowing embers of dried cocoanut shells—their favourite fuel. An important kitchen utensil is known as a *Kachak*. It is an oval, flat-bottomed trough of *Tong* or *Chatak* wood, pointed at both ends like the bows of a boat—used like the *Umete* or *Kumete* of South Polynesia for concocting various toothsome messes of pounded yam, taro, bananas, plantains or breadfruit mixed with cocoanut milk and salt water in varying proportions. The curious philologist may compare with Eskimo *Kayuk*—a canoe. In Ponape a whale-boat is actually called *Waa-sen-kachak*, from its sharp fore and aft build.

They use a needle of human bone for tattooing the elaborate designs on arms, thighs and legs. This they call *Kai*, the operation *Inting* (Sulu *Indian*).

No well-ordered establishment is complete without a husking-stick (*Ak*, called in Samoan *O'a*, and in Tongan *Oka*), used for tearing off the fibrous outer envelope of the cocoanuts. It is a stout stake of mangrove-wood, pointed at both ends and driven into the ground at an angle of about

The same useful wood is used as a digging or planting stick, like the *Oka* of the Hawaiians and the *Koa* of the Aztecs in Mexico. Cut a little longer, they make capital poles for punting canoes along in the shallower portions of the lagoon. These the Ponapeans used to call *Lata* (Hindu *Latha*). Where the *Ak* is found the *Pelik* or scraper is seldom far off.

*Loom*.—The Ponapeans in olden times had a sort of loom resembling the *Puas* of their neighbours of Kuasie, with which they wove the fibre of the banana and the bark of the *Nin* tree into the *Uaiuai-lol* or narrow men's girdles, or into the *Li-kau* or woman's petticoat. This machine, now long out of use, they called *Tantar* (Hindustani *Tant*: *Tantra* id; the verbs describing the process are *Tilpori*: *Toro* and *Ka-tantaki*).

Native houses often get dusty, so the industrious housewife always has two or

three brooms in hand for sweeping out the rubbish and keeping the mats clean and neat. These brooms are called *Kap-en-nok* or Bundles of *Nok*—the central ribs of cocoanut leaflets.

In the house of any person of distinction there will generally be found a huge sea-chest (*Kopa*), or, at all events, a small camphor-wood box (*Kokon*) such as islanders love to secrete their possessions in.

If a native be given to carpentering pursuits one may possibly see a cross-cut saw (*Racharach*) hung up carefully out of harm's way, or a grindstone (*Ū*) standing sentinel in the courtyard amongst the pigs and chickens.

The boat-builder greatly prefers the modern gimlet of steel (*mcu kapurropur*, i.e., "the thing that whirls round") to the primitive borer of his forefathers, made out of a long sharp-pointed Murex shell. It was formerly used for piercing boards and planks in canoe and housebuilding—cinnet lashings supplying the place of nails. The word for a hammer or mallet is *Chuk*: a wedge or nail is *Pach*. In olden times holes were bored and cinnet fastenings used, or wooden trenails. Nowadays they call the nails introduced by traders *Kichin-mata* or Bits of Iron.

Other things necessary in household industry was the *Tikak*—a bone or shell needle, used for sewing together the layers of "Och" or ivory palm-leaf for thatch and joining the leaves of the pandanus into the form of *Loch* or sleeping-mats. They were also used in making the ancient *I* or mat-sails out of the "pit" or pandanus leaves, which had undergone a preliminary process of steaming in the earth-oven. The roll of pandanus leaf for fashioning the sleeping-mats was called *Chal-en-pitipit*, also *Tancit*. For making the native belts of banana fibre (*Tor: Tur*) with their garnishing of pink and white shell-beads (*Pul: Pake*) the Ponapean housewives used a fine tortoise-shell hackle (*Mera*) for combing out the rough material—the inner portion of the banana suckers. These belts from their rarity are much esteemed by the Ponapean, which he values at ten dollars.

#### *Domestic Implements, Tools, Instruments of Music, and Weapons.*

*Axes and Knives.*—The ready wit of the Ponapean is sufficient to supply his simple needs. Nature has been bountiful, and he has proved himself of no mean adaptive powers in dealing with economic plants and the various resources of the lagoon and reef; in providing himself food, shelter and clothing. This will be apparent as one by one we will examine his household implements, his tools, his devices for procuring food by sea and land, his instruments of music, his weapons of war, and, later on, his food and clothing, such as they are.

The Ponape words for axe and knife are doubly interesting historically. They indicate a reversion, through long isolation, to the primitive Stone or Shell age; moreover, they inversely show the early influence of an active Malay element radiating throughout the extensive Caroline Archipelago. Writing, clearly, was not the only art lost by these ocean tribes during their long isolation. And by examining these words we can easily infer how these two things came about,

though the dates of the early migrations and forays are almost hopeless in the lack of proper chronological data and the snapping of traditions—weakening links in the process of untold generations.

Now the general term in Ponapean for instruments of the axe, adze, or hatchet type is *Chila* (in Kiti they are called *Ki*, and in the Metalanim district *Patkul*). From their polished marble-like appearance some have taken their material for white jade-stone, but J. S. Kubary has clearly shown them to be pieces of the central shaft of the *Tridacna Gigas* or Giant Clam, worn down into that form by long and careful rubbing. In our excavations in the central vault of Nan-Tauach, we settled the question beyond dispute, for we dug up a number of these implements both in the rough and the smooth. They are now getting somewhat scarce on the island—ousted from use by the introduction of steel axes, American axes and tomahawks by the ever-increasing competition of traders. (The new introduction they call "*Chila-pangapang*.")

In early days they used to cut down trees with these primitive instruments, with the aid of fire. One charred layer chipped off, fire would be applied again—a somewhat tedious process. At great festivals the grandees used to sit with their adzes balanced over their shoulders, as seen in the picture of a Pelew chief taken by one of Captain Wilson's men after the wreck of the "*Antelope*" on the Pelew reefs in 1782.

*Varieties.*—The *Matau* used for hollowing out canoes.—It has the handle spliced along the back. A small adze was known as *Maluak*, and resembles the *Matau*—only smaller. The word *Chila* is the Motu *Ilā*. It is one of the primitive Asiatic words which the minute observer cannot help noticing in the wide Pacific area. It appears in the Sansk. *Shila*: *Shil*—a stone, and in the Latin *Silix*—flint. The root *Sil* in the sense of piercing, cutting, is, according to Isaac Taylor, of frequent occurrence in the Ural-Altaic tongues.

On the other hand, the Metalanim word for *knife*, "*kápit*," takes us into times when early Malayan or Sulu pirate voyagers landed with creeze and sword (Philippines *Kampit*—short sword: Philippine and Sulu *Kampilan*—a sword), with which they doubtless made an exceedingly lively impression upon the ill-armed aborigines. At the beginning of this century before the traders brought machetes and 18-inch and 2-foot knives, the Ponapeans made their "*kápit*" of split bamboo, those called *Lopuk*, or shell. These they used for slicing up fish or breadfruit, as do the Yap people to this day, who call these latter *Yar-ni-matsif*, or cutting-things of shell. (In Central and Western Carolines a shell-knife is called *Char* or *Yar*—cf. Southern Philippines, *Yoro*, a knife). The Metalanim folk use the old name *Kápit* for the new article, but the people of Kiti and Not have adopted the English word. "*Naip*" they call them, not "*cuchillo*," as one might expect. This preference for English words rather goes against the grain of the Spanish occupiers of the land. Now there are two other highly significant names of Malayan derivation running through these 1,200 miles in the Sea of the Little Islands. Iron is called *Mata* in Ponape; *Masra*, *Mossa*, and *Wessa* in Kusaie.

In the next two groups, the Mortlocks and Ruk, we find the form *Wasai* and *Wasi, Asi*. A little southward and westward we find it reappear in Nuku-Oro and Kap-en-Mairangi as *Wasei*. In Yap it is *Wasai*. In German New Guinea it occurs as *Bassi*. The Malay word is *Basi* or *Besi*, of which the above are doubtless slightly differentiated forms. Finnic *Was* or *As*—iron. Caucasian, *Asa* and *Vasa*.

*Sub-voce Axe*.—It stands to reason that as the basaltic or coral lands of the Pacific produce no iron, steel is unobtainable. It may be presumed that some of the early settlers in the Carolines brought with them a stock of iron or steel weapons, or wrested them from stray pirates of a later day. When these rusted away or got broken, and could not be replaced, the traditional name would in all probability remain, and the natives, under stress of necessity, would fall back upon the handiest materials available to supply their place. Those who live on low coral islets would find the shaft of the *Tridacna*, a shell very abundant on their reefs, a convenient substitute. Those who inhabited high basaltic lands, as Tahiti or the Marquesas—on the first of which the water is always deep over her coral reefs, and the latter has no reefs at all—would fall back on the black basalt stone to fashion their cutting instruments. Samoa and Fiji have done the same. In those islands the blackstone axes were common enough before the advent of the curio hunter. They can still be picked up sometimes on the mountain tops or on the sites of deserted villages and encampments. In Ponape I met with no axes of blackstone, the reason probably being that the shell took a finer edge readily, and was easier to work than the basalt, which does not so readily shape into flakes with keen cutting edges.

The other Malay word is *Parang*, which, in the Central Carolines, is used both for knife and iron. In Malayan vocabularies it is given with the meaning of a bill-hook or short sword, and its survival in these remote lands appears to indicate a lively and deep-seated impression of the terrors of "the noble white weapon" wielded by the piratical hands of these vikings of the Pacific Seas.

*Ponapean Weapons*.—*Pai*, a sling (*Yap Gol*), *Pai-net*, a sling-stone, the favourite missile weapon of the Ponapeans before the introduction of fire-arms by the New Bedford and New England whalers. It is plaited out of strips of *Kalan* or Hibiscus bark, or else out of the cinnet fibre or that of the *Nin* tree bark. Amongst the Ponapeans there is no more favourite passage in the Old Testament than the famous duel of David and Goliath, the translation of which is particularly spirited and happy in the missionary vernacular. The incident is peculiarly in accord with native fashion in every way, and the name David (*Tepit*) is very common amongst the Protestant folk on the south-west coast.

The bow is called *Kachik-en-Katiu*, the arrow *Katiu-en-kachik*—a weapon not much in favour on the Polynesian and Micronesian area. It is more of a Melanesian weapon. In the Gilberts it is called *Bana*, in the Marshall Islands *Li-ban*, i.e., the *Ban* or bow of a woman, regarded as a woman's or children's weapon. In Polynesia, known as *Fana*, and in the Melanesian area as *Vana*, *Van* and *Bana*,

and *Fan*. The Malayan form is *Panah* (in Sanskrit *Ban* or *Van* is an arrow, and *Panach* a bow-string). It may be worth mentioning that in ancient Hawaii the bow was used by lads, old men and women for the noble sport of shooting at rats—a sad come down for the weapon which won Merry England such high renown. The Ponapeans say the bow was used by the *Chokalai*, or dwarf aborigines. The bow was made of Katiu or Ixora wood, the bow-string of the bark of the Hibiscus, the arrows of Hibiscus wood or slips of Alek or reed-grass, tipped with the spine of the sting-ray. Nowadays it is entirely out of use.

The club was occasionally used. It was known as *Lep-en-tuka* or *Chup-en-tuka*, by the Mortlock islanders as *Sop-en-ura*. Also called in Ponape *Chup-en-pok*. The word *Chup* is evidently the Indian *Chob*, which denotes the same weapon amongst the Hindu peasantry. According to Nanchau of Mutok (*Tenedos*) stone clubs called "*Permachapang*" were used. Of these we found no traces either at *Chapen-takai* or *Nan-Matal*, neither did I see during my stay on the island any of the elaborately carved war-clubs or maces noted in the Marquesas, Fiji, Samoan, and Tongan groups.

Spears were the favourite weapon in hand to hand conflict. They were called *Katiu* from a species of Ixora of that name. Its straightgrowing stems were used by the natives for fashioning their spears and javelins. The *Ak* or mangrove also was much used for making spear-shafts. They were pointed with the sting of the Ray (*Likant-en-kap*). In the Mortlocks the spear is known as *Uak* or *Silak*, in Ruk *Anek*, Pulawat *Lil*, in the Central Carolines as *Tillak*, *Tallak*, *Dilok* and *Thilak*. In the Marshalls *Mori*, *Marre* or *Marri*. In the Pelews as *Rumu*, *Lilid* and *Kullolothuk*. In the Mariannes as *Gugudanum*. In the Philippines it appears in the Tagala *Tulag* or *Tolak*—a war-spear. (The Favorlang of Formosa has *Roddok* and *Biloagh*.)

The most formidable of all the Caroline spears were those of Yap, fashioned out of the wood of the *Bû* or Areca palm. They were often nearly 12 feet in length, pronged and barbed on either side in the cruellest fashion so as to inflict a most terrible wound. The prowess of the men of Yap with this redoubtable weapon earned for them a very extensive dominion in the Central Carolines, and indeed, up to Ponape, which some of their more distant forays seem actually to have reached.

*Musical Instruments and Dances.*—Like all islanders they are very fond of music, and a cargo of banjos and accordions would find a ready sale. The *Chavi* (Fijian *Davui*) or shell-trumpet—the *Pu* of the South Polynesians, is used as a signal of war or assembly, like the *Atabal* of the ancient Mexicans. Close by the pointed end of the shell a circular hole is bored. Some of these are of very large size, and are often picked up amongst the foundations of old houses.

The native flute is called *Chup-en-ro* or *Chup-en-pearri*. It is made of a piece of *Ro* or reed-grass or of *parri* or bamboo. It is not quite a foot in length—closed at one end by a stopper of leaves and pierced with six holes up to the mouth-piece. It is not a nose-flute like the *Tosarri* of Formosa, or the *Fango-fango* of Samoa.

The native drum is called *Aip*—the old name *Peu* or *Pau* (the *Pahu* of Tahiti). One I saw in Paliker, now in the British Museum, is about 5 feet in height and made of the wood of the *Tupuk*. It is shaped exactly like a huge erect dice-box. It was covered with the skin of the Sting-Ray and beaten with a stick of Hibiscus wood on occasions of festival. The Spanish chronicler Periero describes a smaller sort which he saw in Not district, which he calls *Piki-piki*, evidently from mistaking the meaning and application of the word *Pikir*, which is a verb meaning *to beat a drum*—not, I think, denoting the drum itself. This one, he says, about 3 feet high and covered with fish bladders, which they collect fresh on the day of the festival—he describes it as adorned with square markings and painted with various colours, especially red and black. When the feast is over they take away the skins and get others, for they are easily burst and need constant renewal. It may be observed that the Ponapeans are very fond of the accordion, and of the modern jew's-harp, which they call *Kachang*, i.e., *make sound*. It seems that they had a sort of jew's-harp of their own, like the Samoan *Utete*, but the modern ones have ousted the ancient article.

*Dances*.—There are two kinds—one peculiar to the men called *Kalek*, danced standing: and another, of men and women together, like the *Siva* of the Samoans, performed sitting (“*Uen*” or “*Wen*”) with graceful wavings of hand, wrist and arm. The dancers are always in *Kapot*—holiday dress, anointed with fish or cocoanut-oil; the men in bright yellow *Kol* or kilts, their heads garlanded with flowers or chaplets of green fern, their necks and arms copiously hung with festoons of fresh cocoanut leaflets, and on the fingers of each hand a sort of ring with bunches of *Nok* or ribs of cocoanut leaflets bristling out. These, in shaking, produce a sort of harmonious rustling which they term *anichinich*. Some of the choruses have a fine deep sonorous chime like those of the Marquesas Islanders. Many of the dances are anything but decorous in character. It is said that a number of the words used in the chants both in Yap and Ponape are different altogether from the spoken language. Certainly some specimens of Ponapean songs written down for me by Kaneke and Chaulik on Paniau were hopelessly unintelligible to me, although I could both read and converse in the vernacular Ponapean with considerable ease and fluency. It would seem that many Sagas of the acts of legendary heroes would have come in from the Marshall Islands and from Yap, and thus would be of great historical interest in tracing ancient connections, and the gradual or accidental fusions of different Micronesian races. It is here that the phonograph or graphophone as well as the camera comes to the aid of the ethnologists. Once get the exact sounds recorded on the wax cylinder, and the task of the philologist becomes tenfold easier; cf. the Hawaiian word *Mele*, a song, and the Pelew word *Moloik*, dancing and singing. *Melakaka* is the word for the song or dramatical composition of a priest or chief, and is therefore very happily adopted by the missionaries to denote the *Psalms* of David, and the Song of Solomon. A funeral dirge, mourning, or threnody is called *Tarak*. It is said to be very solemn, weird and impressive.

## YAP FOLKLORE.

*The Invention of Stone or Fé Money.*

There was a wise old man in Tomil named *Anagumáng*, to whom Le-gerem, the Fairy Godmother of Yap, showed all the stars in heaven, and the reasons of their rising and setting. After three months' study this apt pupil took seven men with him (the usual "perfect number" in Yap tradition), manned large Gothamite canoes, and sailed in to the unknown southern waters in quest of the land of Balao (the Pelew Group) under the guiding of the constellation Mageriger or Pleiades. Entering the North-reef passage and passing Bab-el-Thaob he came down to the Island of Peleleu. A little to the northward of the last-mentioned island lie certain conical islets named *Kokial* scattered about the wide lagoon. Here he found a new sort of shining stone (calcite or quartz), and conceived the idea of hewing it into various portable forms to serve as a rude medium of exchange. There was an abundance of pearl-shell here as well, of which he helped himself liberally to the same end. The quartz-rock, with infinite trouble, he cut with his shell-axes into the form of fishes about a yard long. Some fragments they, for the sake of variety, worked into the shape of a *Wal* or turtle. Other pieces they made into the shape of a crescent moon. Others again they chipped into wheels of different sizes, rounded like the orb of the full moon. With these last, when they had bored a big hole through the middle of each, *Anagumáng* was satisfied. So they loaded up their canoe and returned, the voyage back only taking five days. When they took the stones ashore, Le-gerem kept the wheels with the holes in the middle and threw away the rest as worthless, and put into operation a powerful charm to centre all the desire of the people on the recognised form of standard coinage.

Before this time, ruefully remarks the narrator, there was no fighting in Yap, Ever since that, however, there have been constant civil wars in the land, arising from the eagerness of each tribe to acquire a large portion of the coveted treasure.

After this there were frequent expeditions going to the Pelews from Tomil, Rul, and Gohepa, and many were the people who lost their lives from imprudently putting to sea in the stormy season. Others, after reaching the Pelews, perished on their return journey, their vessels swamping or upsetting from carrying too heavy or carelessly-stowed freight of these precious and fatal stones. Others, again, were slain in battle by the people of the country, who were valiant men, and naturally much resented these uninvited visits and the plundering of their beds of pearl-shell. But now there is peace, and the King of Pelew has a number of Yap-men residing, by his permission, engaged in hewing out these coveted treasures and sending them up to Yap by occasional trading schooners, which take them in as ballast.

*The Invention of Fire and Cooking.*

The yam and the taro were in Yap, but as yet there was no fire to cook them. The natives used to dry them in the sand, and, as it were, sunbake them. And the folk suffered grievously from internal pains and besought Yalafath to help them once more. Immediately there fell a great red-hot thunderbolt from the sky and smote a Choi-tree (*Pandanus*). At the contact of the fiery element the Choi broke out into a regular eruption of prickles down the middle and sides of every leaf. Dessra, the Thunder-God, thus found himself fixed fast in the tree-trunk, and called out in a lamentable voice for somebody to deliver him from his irksome prison. A woman named Guaretin, sunbaking taro hard by, heard the voice, and helped the distressed god. He inquired on what work she was engaged, and when she told him, bade her fetch plenty of moist clay. This he kneaded into a goodly cooking-pot (*Thib*), to the great delight of the worthy housewife. He then sent her in search of some sticks from the *Arr* tree (called Tupuk by the Ponapeans) which he put under his armpits, and infused into them the latent sparks of fire, and went his way. This is how the art of making fire from the friction of wood, and the moulding of pots out of clay, came to the primitive folk of Yap. Hence two proverbs suggested to the cautious and practical Yap mind:—

*Moral.*—Never refuse to do a good turn to those in need—it may pay you better than you think. To which may be added another: Beware of hidden fire even when you see no smoke.

*The Invention of Canoe-building.*

The indefatigable Le-gerem prepared to astonish her people with a display of first-class magical powers. One day a very big canoe was seen slowly floating down from the clouds, let down by innumerable ropes or pullies, just over the village of Gocham or Gotham in Tomil. The people flocked in crowds to see the wonderful sight. Some inauspicious words of the impatient multitude broke the charm. Before the canoe could be lowered in safety to the earth, the ropes broke and the wondrous structure was smashed up beyond all hopes of repair. Then Le-gerem hewed a Voi tree, measured it out with care, and with infinite pains made another of similar model. The long and somewhat clumsy Yap canoes, running up high in bow and stern, fore and aft, like Scandinavian vessels, with their heavy solid outriggers and the curious fishtail ornamentation in bow and stern, show how the industry of the Gothamite ship-builders followed the directions of their long-suffering patroness.

Names of portions of woodwork in a Yap canoe:—

*Ngî.*—Central platform or seat.

*Gol.*—Seats.

*Gom.*—High figure-head in bows.

*Karagai.*—High figure-head in stern.

*Madamafeng.*—Strengthening outer-pieces.

*Cf. Tagala Barangai: Barangan*, a ship.

*Falang*.—Solid platform between body of canoe and outrigger.

*Tham* (Polynesian *Ama*, Fijian *Thama*).—A heavy piece of wood, flat and pointed at each end, forming to the floating portion of the outrigger. This is doubtless a relic of the ancient double canoe, on which model the early Pacific navigators used to build their vessels for going long sea voyages.

*Galuf*.—Strengthening pieces, cross bits running parallel with *Tham*.

*Daot*.—Long pieces, supporting *Falang* and uniting *Tham* to body of canoe.

*Totan*.—Cinnet or cocoa fibre lashings holding *Daot* in place.

*Filai*.—Upright pieces crossed by *Galuf* and connecting *Tham* with *Daot*.

*Eot*.—Thin auxiliary upright pieces, connecting *Tham* with *Daot* to give elasticity and save straining.

#### *The Naming of the Birds.*

Laponga was a Chaumaro (High Priest) of old in Metalanim. It was he who sat at the left hand of the first Clau-te-leur King, it was he who first tasted the Kava, and he who uttered the first "*vinani*," the magic spell invoking the presence of Nan-Ul-Lap, chief of the "*ani*" or local genii who love to be honoured when the feasts and the dances are the order of the day in the Great Lodge. The second man in the land the keeper of the King's conscience, as it were, his Father-Confessor. He sat in the Council Lodge, his locks streaming below his girdle after the manner of his ancient caste, crowned with the yellowing leaves of *Ting*; his *Patkul* or shell axe crooked obliquely over his shoulder, and his carved *Irar* or magic staff laid close to hand; in his fingers a bundle of leaves of *Alek*, the native reed-grass used in casting lots after the ancient custom of the land. Such was the wizard and such his estate. And he was wise beyond the wisdom of all men, but his love for his fellows tallied not therewith. For his heart was cold, and he ever delighted in mischief and ill pleasantries, and would wander at times over the land in all manner of strange shapes, working his evil will. In one of his freaks in the form of a *Lukot* or native owl, he took to wife one of the *Likat-en-uai* or nymphs of the forest. Numerous was their progeny, and the hanging woods of the lofty island were filled with beings endowed with human utterance, and who could change from bird into human form at will. After process of time, as mortal men are wont, Laponga grew weary of his fairy queen, and would have taken to wife a lady of high birth at the Court of the King. And the children of the forest knew of it; and it came to pass that whenever the great magician took his walks abroad, the woods resounded with the cry "*Ipa, Ipa*," which, being translated, signifieth "*Papa, papa*." In great wrath at this interruption of his meditations the great man, like the bald-headed prophet of another tale, turned, and with a solemn imprecation, fixed his children for ever in their bird-forms and took away from them human utterance.

Then in a twinkling a strange babel broke out in the forest-glades. The

angry children continued their feeling remonstrance, calling out upon their unnatural parent, each as his peculiar vocal organs gave him utterance. The *Kaualik* or blue heron croaked out "*Ko*," "*Kau*," "*Kau*," the doves, after their kind, murmured "*Murrorroi*," "*Kin-uet-uet*" and "*King-king*," and the brown parakeet broke out into inarticulate chirpings "*Cherret*;" the small sea-bird with black and white tail feathers could only scream out hoarsely "*Che-a-a-ok*." The other birds could only utter doleful and woeful screeches. Some went away into the deep bush and let themselves out in spite as tenements (*tá-n-wáar*) to the wood-demons there; and delight at times to afflict human settlements with their ill-omened voices, pouring forth songs of impending death and doom in the stillness of the night. The blue heron went out on the salt marshes and the edges of the reef, where he stalks about the pools in mournful dignity, picking up little fish and crabs. All day long the *Murroi* or grey dove wails for her lost voice in the woods: the *Cherret* twitters round the coco-blossoms, whilst the *Kulu* or sandpiper and his elder brother the *Chakir* wail dismally over the sandy flats, the shingle, and the coral limestone. But one small bird, more persistent than its fellows, pursued *Laponga* on his way, and so deafened him with its ceaseless twittering, that growing weary he faced around and loosed a fresh curse upon the head of his much-injured offspring. Thus ran *Laponga's* curse—

"May your head turn round and round when a man casts a stone at you, so that you may fall at their feet from very dizziness—an easy prey to be baked in the oven for their meat. This, I say, whenever the hungry wanderer does as I do now." With these words he chased away the wretched fowl with shower after shower of pebbles. And so it happens to this day, with the generations of little brown birds in the inland bush, that whenever one throws a stone in their direction, whether he hit or miss, down they come fluttering to the ground, trembling, helpless and paralysed. And the name of the bird is *Li-máaliel-en-takai* or *Miss-giddy-at-stones*.

And *Laponga's* miracles held men's minds in awe, for he did many notable deeds. The record of his enchantments, his sorceries, and of the knaveries and manifold mischiefs he wrought; is it not set down in the lost book of the annals of the Kings of *Metalanim*. After *Laponga's* death, from which his arts could not protect him, his head was changed into stone, and lies unto this day right in the middle of the water-way between the islets of *Pan-ilel* and *Pein-Aring*. The tale must be true, for there is the very stone. We collided sharply with it on one of our exploring sea-trips at low tide and all but caved in the bows of our canoe, and kept the *Manilla* man busy enough for some minutes alternately bailing and praying to the saints until we beached her and fixed up the leak.

## TWO FAIRY TALES.

## A METALANIM ALLIGATOR STORY.

(I tell you the tale as it was told to me by an asthmatic old sage in the rebellious tribe of Metalanim, in a dialect bristling with diphthongs and double and treble consonants.)

*The Visit of an Alligator to the Ponape Coast.*

In the reign of King Chau-te-Leur a huge lizard (*Kieil alap amen*) came swimming into the great harbour, and took up its quarters on the island of Pau-Katara, otherwise called Pangothra. Taking him for an *Ani* or tutelary genius they brought him heaps of food and made offerings of baskets of fruit and savoury messes of cooked yams and bananas to conciliate the favour of their spectral-looking visitor (*manlikamichikaman*). As might well be expected, vegetable diet did not content him, and there was soon a disappearance of some of the basket-bearers, which the chiefs considered, after losing some of their most industrious slaves, as a mean act of ingratitude. So the big lizard was proclaimed a public enemy and a cannibal fiend, and the warriors of the tribe went forth to battle with the monster. But he came forward very angry, seized some of the boldest in his iron jaws and crunched them up in pitiable fashion. They belaboured him industriously on every side, but their spears and shell axes failed to make impression upon his thick skin, whilst pebbles and sling-stones glanced off him harmless as raindrops. So at last, since the lizard would not run away, of course the Metalanim braves had to. Finally subtlety triumphed where numbers and valour availed nothing. It was suggested to slay a fat hog, cut him open, and after stuffing him full with pounded Up root, to leave him roasting over a great fire blazing in the basement of the Nach or Council Lodge. All the sides of the Nach were to be walled up with logs and driftwood, save one opening big enough for the monster to crawl through—attracted to his last meal by the far-reaching sound and scent of the crackling and frizzling pork. When their foe was fairly stupefied with the working of the narcotic drug the opening was to be quickly filled up and the building set in a blaze. (Such was the fate of this solitary alligator, no doubt washed out to sea on driftwood from one of the great rivers of New Guinea, or drifted away through the straits of Gilolo by the ocean currents.) He crawled right into the trap set for him, devoured the cooked pig, felt very drowsy, and went off into deep sleep, to wake up, finding himself trapped, shrivelling in a merciless furnace of fire with his triumphant enemies shouting and dancing round his funeral pyre.

*The Puliet or Honey-eater.*

This is a little bird with long delicate curved bill and crimson breast, about the size of an English robin, and very much like him in pugnacity and cheekiness.

It lives by extracting honey from the flowers of various plants and trees, especially from those of a cocoa-nut. Of him the natives tell a quaint little tale, of which this translation gives some echo—

“ A little red bird in a greenwood glade  
Clung tight to a bough in the leafy shade ;  
Whilst the light airs whispering out of the wood,  
Swung him to and fro in a sulky mood.  
‘ *I kang mokitikit* ’ shrill he sang,  
And the glades in answer resounding rang ;  
And this as an English songster might say,  
‘ *I don't at all like on this bough to sway.*’  
As he carolled harder the breezes blew,  
And his querulous notes fast and faster flew ;  
Then the zephyr's patience quite failed at last,  
And they breathed out a sudden and furious blast.  
At the shock, in a sudden disastrous fall  
Toppled tree and branches and bird and all :  
And scarce from the ruins escaped he creeps,  
And he still wakes the echoes with doleful cheeps ;  
In a feeble chirrup he tells his woes,  
And the practical jokes of his fairy foes.”

*Explanation of Plates XIX-XXIV.*

*Plate XIX.*

House at Chakar-en-Yap, Ronkiti River.

*Plate XX.*

Portion of the inner enclosure surrounding ancient vaults at Nan-Tauach in the Islet of Nan-Matal, Metalanim District, East Coast of Ponape. In the foreground are three natives of Metalanim.

*Plate XXI.*

Fig. 1.—Entrance to the sanctuary of Nan-Tauach, Metalanim.

„ 2.—The Headman of Paliker, with his wife and daughter, tribe of Chokach, North-West Coast, Ponape.

*Plate XXII.*

Group of women and children at Ponatik, Metalanim tribe, East Coast, Ponape.

*Plate XXIII.*

*Objects from the Caroline Islands.*

Figs. 1, 3.—*Patkul*, or adze blades of clam-shell, excavated in the ruins of Metalanim on the Island of Ponape.

Fig. 2.—*Fē*, or disc of coral rock used as money, from Yap ; quarried in the Pelew Islands.

„ 4.—Gong of basaltic rock from Ronkiti, Ponape ; used as a signal or bell in religious ceremonies.

„ 5.—Wooden drum (*Aip*), from Paliker district, North-West Coast of Ponape.

„ 6.—Model of a Ponapean house.

*Plate XXIV.*

*Objects from the Caroline Islands.*

- Figs. 1-19.—Specimens excavated in the ruins of Metalanim on the Island of Ponape.  
„ 1, 2, 3, 4, 6, 13, 16.—Shell armlets excavated in the central vault, Nan-Tauach.  
Fig. 5.—Scraper of cowry shell, used for stripping off the outer skin of the bread fruit.  
„ 7.—String of shell discs, found in the central vault, Nan-Tauach.  
„ 8.—Modern necklace of shell-beads, from Mortlock Island, for comparison with No. 7.  
Figs. 9, 10, 11.—Bivalve shells pierced for suspension, Nan-Tauach.  
„ 12, 18.—Shanks of pearl-shell fishhooks found in the central vault of Nan-Tauach.  
„ 14, 17.—Pieces of shell pierced, Nan-Tauach.  
Fig. 15.—Cowry shell pierced for ornamenting prows of canoes.  
„ 19.—Portion of patkul or shell chisel.  
Figs. 20-23.—Tablets engraved with characteristic patterns for Mr. Christian by Alek, of Ponatik, S.E. Ponape.

N.B.—All the specimens figured in Plates XXIII and XXIV are in the British Museum.

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ANNUAL GENERAL MEETING.

JANUARY 24TH, 1899.

F. W. RUDLER, Esq., F.G.S., *President, in the Chair.*

The Minutes of the last Anniversary Meeting were read and signed.

The CHAIRMAN declared the ballot open, and appointed, as Scrutineers, Mr. S. E. Bouverie Pusey, and Mr. T. Hay Wilson.

The TREASURER read his Report for the year 1898.

The SECRETARY read the Report of the Council for 1898.

These Reports were adopted on the motion of the PRESIDENT, seconded by Mr. BRABROOK.

The PRESIDENT delivered his Anniversary Address.

It was moved by Professor THANE, seconded by Dr. GARSON, and unanimously resolved :—

“That the thanks of the Meeting be given to the President for his Address, and that it be printed in the *Journal* of the Institute.”

The SCRUTINEERS gave in their Report, and the following gentlemen were declared to be duly elected to serve as Officers and Council for the year 1899.

*President.*—C. H. Read, Esq., F.S.A.

*Vice-Presidents.*

H. Balfour, Esq., M.A.                      |                      A. J. Evans, Esq., M.A., F.S.A.  
A. P. Maudslay, Esq., F.R.G.S.

*Secretary.*—Wm. Crooke, Esq., B.A.

*Treasurer.*—A. L. Lewis Esq., F.C.A.

*Council.*

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O. M. Dalton, Esq., M.A.	Prof. G. B. Howes, LL.D., F.R.S.
R. W. Felkin, Esq., M.D., F.R.G.S.	Sir H. H. Howorth, M.P., F.R.S.
H. O. Forbes, Esq., LL.D.	Baron A. von Hügel.
J. G. Garson, Esq., M.D.	Sir Hugh Low, G.C.M.G.
G. L. Gomme, Esq., F.S.A.	R. Biddulph Martin, Esq., M.P.
Wm. Gowland, Esq., F.S.A.	J. L. Myres, Esq., M.A., F.S.A.
Prof. A. C. Haddon, M.A., D.Sc.	J. Edge Partington, Esq.
E. Sidney Hartland, Esq., F.S.A.	Sir C. E. Peek, Bart., M.A., F.S.A.
Col. Sir T. H. Holdich, K.C.I.E., C.B.	Prof. A. Thomson, M.A., M.B.

*Assistant Secretary.*—J. Aplin Webster, Esq.

A vote of thanks to the retiring President, Vice-President, and Councillors, as well as to the Secretary, the Treasurer, the Auditors, and the Scrutineers, was moved, seconded, and carried by acclamation.

## TREASURER'S REPORT FOR 1898.

The income of the Institute for the year 1898 from ordinary sources was £584 8s. 2d., being £34 10s. 10d. more than the income from the same sources in 1897, an increase which has been caused by our receiving three life subscriptions in 1898, as against two in 1897, and by the collection of a larger amount of arrears, a source from which I am in one sense happy to say we cannot expect to receive so much this year. The income properly belonging to 1898 amounts therefore in all respects practically to the same as that for 1897, but our bank balance has been increased by the sale of our Tasmanian skeleton and busts to the Natural History Museum for £115.

The actual payments during the year 1898 were £557 9s. 8d., but the double number of the *Journal* which was published in November has not yet been paid for, although the Tasmanian, who was the original owner of the skeleton which we have sold, has provided us with the means of paying for it, an honour which of course he could neither have anticipated nor comprehended during his life. If the double number had been published in two parts in August and November as has been our usual custom, the August number would have been paid for in 1898, and the November number in 1899; so, in order to keep the accounts in proper shape for comparison, I have reserved £65 from the bank balance and added that amount to the actual payments for the *Journal*, bringing them up to £291 16s. 4d., and the total expenditure to £622 9s. 8d., which, though £23 15s. 6d. less than the expenditure in 1897, is £38 1s. 6d. in excess of the income for 1898, including life subscriptions.

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.

*Receipts and Payments for the Year 1898.*

[illegible]

**Examined and found correct.**

(Signed) M. J. WALHOUSE,  
H. N. HUTCHINSON, } Auditors.

The cost of the *Journal* in 1894 was to £249, in 1895 £257 (for 5 numbers), in 1896 £204, in 1897 £325, and in 1898 £291; so that, although we have not paid quite so much for the *Journal* in 1898 as in 1897, we have paid considerably more than in the years 1894 to 1896, and I have no doubt that our Members feel that they are getting the benefit of that extra expenditure in the shape of a considerably improved *Journal*; but although the Tasmanian—more usefully employed perhaps after his death than during his life—is keeping us going for the present, it is evident from the foregoing figures that some means of bringing our income up to our expenditure, or our expenditure within our income, are very much to be desired.

The liabilities at the end of 1898 (other than our moral liability to life-members) were:—

	£	s.	d.
Rent, etc., for one quarter ... ..	33	15	0
Double number of <i>Journal</i> , illustrations, miscellaneous printing, and sundries...	158	6	2
<i>Notes and Queries</i> ... ..	42	18	10
	<hr/>		
	£235	0	0
	<hr/>		

The Assets at the same date were:—£600 Metropolitan 3½ per cent. Consolidated Stock (worth about £700), cash in hand and at the Bankers, £220 0s. 1d. some unpaid subscriptions, and the library, furniture, and stock of publications.

A. L. LEWIS, *Treasurer*.

#### REPORT OF THE COUNCIL OF THE ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND FOR THE YEAR 1898.

The Council have to report that during the past year eleven Ordinary Meetings, and two Special Meetings have been held, in addition to the Annual Meeting.

In February and May appeared Nos. 102 and 103 of the *Journal*, completing volume 27, the last of the first series. After much consideration the Council decided that in future the size of *Journal* shall be not demy octavo but imperial octavo.

In coming to this decision, they have not been unmindful of the disadvantages attending any alteration in size, but have felt that in this case the advantages far outweigh them. In the first place the new volumes will have a much more attractive general appearance; secondly, it will be possible to illustrate them much more effectively. Where the illustrations to the Journals of Scientific Societies are mainly of a diagrammatic kind there can be little, if any, advantage in an enlarged page. But the usefulness of an Anthropological Journal must always depend largely on

the abundance and variety of the pictures it contains. Sometimes it is important to show objects with as little reduction in size as may be practicable; in other cases it is highly desirable to exhibit a considerable number of things on a single page, in order that their various characteristics may be visible at a glance. Something may obviously be done to attain these results with a demy octavo page by means of folding plates. But the special liability of folding plates to be injured, even with the most careful usage, must always make their adoption an unfortunate necessity. And an enlarged page must very greatly reduce the need for their adoption.

In short, in improving the form of the *Journal*, the Council feel that they may claim to have considered alike the best interests of the Fellows of the Institute and the reputation of the *Journal* with students of Anthropology generally both in this country and abroad.

Owing to various circumstances, it was also decided that the first number of the New Series should not be published in August, but in November, as a combined August and November part. This double number contains 200 pages, imperial octavo, with 15 plates and many woodcuts.

Many valuable additions to the Library have been received during the year, and the Catalogue has been kept up to date.

Mr. J. L. Myres has done much during the year towards the classification of the large collection of photographs of various kinds in the possession of the Institute.

The following table shows the present state of the Institute as regards the number of its members, compared with its condition at the beginning of last year.

	Honorary.	Corresponding.	Compounders.	Ordinary.	Total.
January 1st, 1898 ....	48	27	82	207	364
Since elected.... ....	3	—	3	12	—
Deceased or retired ....	2	1	2	4	—
January, 1899 ....	49	26	83	215	373

The following are the names of Fellows whose deaths have been reported during the year:—

Dr. E. Dally, Paris, Honorary Member.

M. Gabriel de Mortillet, Saint Germain-en-Laye, France, Honorary Member.

Right Honourable Sir George Grey, Bart., K.C.B.

Sir Henry Peek, Bart.

Major-General Woodthorpe.

ADDRESS DELIVERED AT THE ANNIVERSARY MEETING OF THE  
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND  
IRELAND, JANUARY 24TH, 1899.

BY F. W. RUDLER, F.G.S., PRESIDENT.

IN soliciting your indulgent attention to a brief review of certain phases of anthropological progress during the past year, it is not without satisfaction to note at the outset that our Institute has played an honourable part in assisting this advance. The communications contributed to our Meetings during the session which has just closed may, I think, be compared favourably—whether in respect of number, of value, or of variety—with those of any average year. Every department of our many-sided science has in turn been presented to our Fellows; and the tastes of all have been consulted, without I hope undue prominence having been given to any special branch.

Probably the most interesting event to ourselves has been the issue of our *Quarterly Journal* under a new guise. Opinions may differ as to details; but on the whole the Institute is, in my opinion, to be distinctly congratulated on the more imposing form in which its communications are now given to the world. As the organ of the Institute, the *Journal* demands at all times our solicitous attention. To Fellows who are not resident in or near London the regular receipt of the *Journal* is the chief advantage of membership. The time has not yet come when absentees can participate in our proceedings through the aid of an electrophone, or any other physical medium; and they consequently have to wait until the appearance of our *Journal* before they really know what has gone on at our Meetings. Hence it becomes a matter of the first moment that the *Journal* should be issued with punctuality, and should not only contain the papers read at the Meetings, but also record the accompanying discussions, so as to fairly reproduce our actual proceedings. In both these respects there is admittedly room for improvement in the future.

No one supposes that the mere increase in the size of the page of our *Journal* will augment its scientific value. It is not the biggest people who always say the wisest things. A weak paper gains nothing in scientific importance by being printed in large type, with broad margin, on an ample page; but for all that, the style and size undoubtedly count for something with the reader, especially in the case of papers with graphic illustrations. In these latter days we have become so accustomed to find, even in cheap works, such a crowd of illustrations due to photo-lithography and process-work, that our members may fairly expect in the future that our *Journal* shall be more copiously illustrated than it has been in the

past. The advantage of a broad page will become more apparent when we find ourselves in the happy position of being able to illustrate our papers with an unstinting hand.

Considering our limited financial resources, it must be admitted that the *Journal* is very fairly treated. From the account which our Treasurer presented last year, and which was published in our May number, it appears that 50 per cent. of our total expenditure in 1897 was appropriated to the *Journal*. It is true that this amount was above the average; but it is to be hoped that in future by an increased income, a yet larger sum may be available for our publications.

One obvious way in which our *Journal* could be materially improved, if funds permitted, would be by the regular publication of an epitome of the World's Work in Anthropology. In no English journal have we a systematic review of anthropological literature in any way comparable for instance with the valuable collection of classified *Referate* in the *Archiv für Anthropologie*. Students of other branches of science in this country are not in this unfortunate position. The chemists for instance have their portly volume of "Abstracts of Papers"; the zoologists possess their annual "Record"; the Civil Engineers find a large part of their "Proceedings" devoted to abstracts of papers; the geographers receive in their monthly journal a regular summary of progress; and it would be well if our "Miscellanea" could be so expanded as to give a systematic quarterly survey of anthropological literature.

Experience, however, convinced me many years ago, when working on quite another subject, that it is practically impossible to organise a body of honorary contributors who can be relied upon for regular work of this kind. A volunteer will readily enough write an abstract of a paper in which he happens to be personally interested, but such work remains more or less capricious; and few people care to undertake the drudgery of wading through long memoirs in which they have no special interest. Such work can never be systematically and satisfactorily done unless it is undertaken in a professional manner by a staff of paid contributors. At present such a scheme lies far beyond our scope, but there is surely no reason why it should always remain there.

Many years ago General Pitt-Rivers remarked from this Chair that "the Anthropological Institute has only to be properly worked in order to become one of the most prosperous societies in the country." Unfortunately the Institute has had since then to struggle with a succession of adverse circumstances, especially with a sadly inadequate income. Money is practically the real index of our working power, but our excellent Treasurer, who so judiciously manages our finance, finds himself all too soon at the bottom of our purse. If the *Journal* is not to suffer from a chronic state of semi-starvation, but is to enjoy such generous treatment as will enable it to develop its full powers, it is imperative that we should increase our regular income; and the obvious way to do this is by the introduction of new members. There ought not to be the slightest difficulty here, for the British Empire is surely a sufficiently ample collecting ground. At the

present time, however, out of the three or four hundred million inhabitants of this Empire, it appears that about 300 individuals have thought it worth while to attach themselves to our Institute, the one central British organization which is specially devoted to the scientific study of Man. The proportion does not strike one as excessive; and I hope that I shall not be considered unreasonable if I venture to say that it ought to be increased at least ten-fold. With 3,000 members, instead of 300, the Anthropological Institute would have a fair chance of exhibiting to the world what it could do; and I fancy the world would not be dissatisfied with the exhibition.

Looking at the character of the subjects, so diverse and so interesting, discussed at this Institute, it might naturally be assumed that people would anxiously press forward, and enrol their names in our list of Fellows. But as this assumption is hardly supported by fact, it is curious to inquire how it comes about that, as a body, we are not exactly popular.

It seems to me probable that people stand aloof from the Institute for two opposite reasons—some holding that our studies are too specialised, and others that they are not specialised enough. The one set regards Anthropology as a formidable branch of biology—its very name a stumbling block—representing a science to be comprehended only by those who have had the advantage of special training; whilst the other group regards Anthropology as an incoherent assemblage of odds and ends of knowledge, not yet sufficiently systematized to rank as a distinct science. The popular mind seems, in fact, to be in rather a nebulous state as to what is, and what is not, Anthropology.

For a good deal of this haziness anthropologists have themselves to blame. The term Anthropology has been used, and is still used, both in a narrow and in a wide sense. This Institute, it is true, has always accorded to the term its most expanded definition, so as to include a scientific knowledge of Man in his entirety, physical and psychical, past and present. But, as we all know, certain schools have employed the term in a much more restricted sense.

A notion has got abroad in certain quarters that Anthropology is a special branch of natural history dealing only with the physical constitution of man, and is consequently too technical a study for those who have not had the advantage of scientific training in human anatomy and physiology. It is true that some of the most valued contributions to this Institute relate to man's bodily structure; but these are only too rare, and surely the occasional reading of a paper which requires severe study of a special character for its due appreciation ought not to prove in any way a barrier to membership. Does any one stand aloof from the Royal Geographical Society because he happens to be unacquainted with the mathematical mysteries of map-making? And just as a man who may be ignorant of surveying and cartography finds abundance of interest in other departments of geography, so he who is ignorant of anatomy has only to turn over the pages of our *Journal* in order to find no lack of interest in the many other departments of anthropological inquiry.

It has often been pointed out that the Science of Anthropology, or the

systematic study of Man, drops naturally and neatly into two parts, which are distinguished in our little volume of *Notes and Queries* as *Anthropography* and *Ethnography*. This duality of the subject is emphasised, for instance, by the authorities of the British Museum, who put a sharp interval of three or four miles between the collections of Anthropography at South Kensington and those of Ethnography at Bloomsbury. The student of Biology, seeking acquaintance with the physical constitution of man, visits one branch of the museum, whilst the student of Sociology, occupied with the study of human institutions, confines himself to the other department.

Seeing, then, that Anthropology opens up two distinct lines of study, it might fairly be assumed that the Institute has a double chance of success. By appealing to students of diverse tastes, it ought to attract an exceptional number of adherents—especially as that branch which deals with the development of human culture is a popular, fascinating, and readily-accessible study.

Addressing the Institute from this Chair, fifteen years ago, Sir William Flower declared that "a national collection of illustrations of the physical characters of the races of men . . . is still a desideratum in this country." What he has himself since done to supply this deficiency may be seen by any visitor to the Upper Mammalian Gallery of the Natural History Museum, under the care of Mr. Oldfield Thomas. Although much yet remains to be accomplished before an anthropological collection worthy of the country is obtained, a fine nucleus has already been formed by the accumulation in this gallery of a most valuable series of skulls, skeletons, casts, life-size models, samples of hair, photographs, drawings, and distributional maps; whilst the accompanying explanatory labels form by themselves an excellent introduction to the study of the chief varieties of mankind. It is earnestly to be hoped that the foundation of an Anthropographic Collection thus laid by Sir William Flower, with the assistance of Mr. Lydekker, will not be allowed to remain in its present state, but that the distinguished naturalist who has now charge of the Natural History Museum will erect upon it a structure that shall ultimately realize in full Sir William's long-cherished ambition of a grand National Collection.

In connexion with Sir W. Flower's services to anthropological science I may remind you of the recent publication of a collection of his Essays and Addresses, including one of the presidential discourses which he delivered at this Institute, and two which he gave to the Anthropological Section of the British Association at the York and Oxford meetings. Although Dr. Garson has noticed this work in the last number of our *Journal*, I may here be permitted to remind the Fellows that Sir William's sympathetic reference in his British Association Addresses to the work of the Anthropological Institute will now attract renewed attention, and ought to bring our claims before a large circle of readers. When an address is decently buried in one of the thick brown-backed volumes of the series of British Association Reports, it is apt to drop out of memory; and consequently the

resuscitation of Sir W. Flower's Addresses by this re-publication is likely to be a distinct advantage to the Institute.

While referring to anthropology as represented in museums attention may be fitly called to the new Anthropological Gallery at the Paris Museum, a description of which appeared in a recent number of *L'Anthropologie*. The lower part of the new building is devoted to Palæontology, illustrating, so far as the imperfection of the record permits, the progress of life throughout the geologic ages. Above this is the Gallery of Comparative Anatomy, where the student of anthropology may find food for reflection in the excellent series illustrating the structure of the anthropoid apes. Then in the upper story is the Gallery of Anthropology, arranged under the care of Professor Hamy. According to M. Verneau it has already been found that the space allotted to anthropology is sorely inadequate to its needs; so that only a comparatively small part of the treasures can be publicly exhibited. Moreover, the difficulty of exhibition has been increased by the recent addition of the valuable and extensive collection of prehistoric antiquities of the late Marquis de Vibraye.

In a review of the published works of our own Fellows during the past year, the first place must, in my opinion, be unhesitatingly accorded to the noble volume which General Pitt-Rivers has issued, as the fourth instalment of his monumental work descriptive of those researches which he has so long been carrying on in Cranborne Chase. What immediately strikes the reader in looking through this remarkable record of research is the evidence it affords of the strictly scientific spirit in which the investigations have been conducted. Throughout General Pitt-Rivers's explorations he has never spared pains to secure the greatest possible thoroughness and accuracy in all details of the work. Every object, however trivial, found in the course of the exploration is preserved, and the depth at which it occurred is determined and recorded. Just as geologists, with the growing exactitude of their science, record not merely the formation but the particular horizon at which a fossil is found, so General Pitt-Rivers insists on the necessity of determining by precise measurement the position of each object discovered in the excavation. The care and minuteness with which he now studies the relics that he exhumes is well illustrated by his systematic classification of the pottery. After an experience of seventeen years he is able to use the fragments of pottery as valuable aids to determine the age of the deposit in which they occur; hence the need of rigorous precision in marking their position. A fragment of pottery thus becomes to the archæologist what a characteristic fossil is to the geologist: it enables him (unless it chances to be *remanié*), to determine the chronological position of the deposit in which it occurs, or at least its place in a chronological sequence. Geologists know to their cost that fossils have occasionally been assigned to false horizons, in consequence of having fallen from one level to another. In like manner General Pitt-Rivers is fully aware of the danger of confusion among archæological relics; and hence he adopts a method of digging which precludes any possibility of error as to stratigraphical position.

Observations made with such exemplary care are recorded in a manner equally precise and systematic; and the result is a series of magnificent volumes, worthy alike of the work and the workman.

It might not unnaturally be assumed that I should take the opportunity on this occasion of referring to that department of anthropological study in which geologists are specially interested. But as a matter of fact, the geological aspect of prehistoric archaeology has been so fully discussed of late that there seems little room, in the present state of our knowledge, to say more. As a proof of the interest which geologists are taking in the discovery of the relics of early man, I may mention that the subject was selected as a fit topic for anniversary addresses last year by the presidents of the two metropolitan societies devoted to the study of geology—the Geological Society of London and the Geologists' Association.

Dr. Henry Hicks, F.R.S., in retiring from the presidential chair of the Geological Society last February, delivered a valuable address "On the Evidences of the Antiquity of Man furnished by Ossiferous Caverns in Glaciated Districts in Britain." His own researches at the Ffynnon Beuno and Cae Gwyn Caves, in the Vale of Clwyd, led him, some years ago, to the conclusion that man lived in that part of the country at a time which may be regarded as pre-glacial. He holds that the remains of extinct mammalia found in these high-level caves must have been introduced either before any of the associated glacial deposits could have been laid down, or, at latest, in the early part of the glacial period, before there was any considerable accumulation of snow on the mountains or any great glaciers in the valley. Reviewing the recent course of geological opinion in this country, it must be admitted, I think, by any unprejudiced observer, that there is a growing opinion in favour of man having existed in the British area in times which, if not strictly pre-glacial, may, at least, be called inter-glacial.

Turning now to the other metropolitan organization for the promotion of the study of geology—the Geologists' Association—we find that Mr. E. T. Newton, F.R.S., on relinquishing the presidential trust in February, delivered an interesting discourse on "Palæolithic Man," supplementary to his address of the previous year on "Tertiary Man." Although Mr. Newton, with characteristic caution, is not prepared to assent to the existence of man during the Tertiary period, he believes that we have found in this country the fossil relics of man's bony framework in deposits of undoubted pleistocene age. The Galley Hill skeleton, which he described some years ago, is probably the most ancient human relic yet unearthed in Britain.

Since the late Sir Joseph Prestwich called the attention of this Institute, in 1892, to the curiously-chipped brown-coloured flints found by Mr. Benjamin Harrison on the chalk plateau of Kent, these flints have become a centre around which very animated discussion has frequently been waged. One of the latest contributions to this interesting subject is a paper read before the Geological Society last April, by Mr. William Cunningham—a gentleman whose ripe judgment

on geological subjects commands our respect. The great antiquity of the flints is suggested, first, by their occurrence in connection with the so-called "Southern Drift," which, it is believed by most geologists, must have been formed before the erosion of the local valleys; and secondly, by the very crude character of the chipping. Mr. Cunningham, however, refuses to regard the flints as pre-palæolithic, or "Eolithic"; but believes that the deposits in which they occur are of true palæolithic age, whilst the marginal chipping of the flints, on which so much reliance has been placed, is, in his opinion, due to natural causes.<sup>1</sup>

Mr. Cunningham's scepticism upon this subject had previously found expression in the pages of *Natural Science*, where replies to his arguments were published last February by the Rev. R. Ashington Bullen and by Mr. W. J. Lewis Abbott.

In a highly suggestive paper, contributed a short time ago to the Royal Archæological Institute, our distinguished member, Professor T. McK. Hughes, dealt critically, as only a geologist could deal, with the evidence bearing upon the early history of man, as deduced from the form, the condition of surface, and the mode of occurrence of dressed flints. He knows no evidence which would justify the inference that any implements older than the palæoliths have yet been found. It is sometimes assumed that evidence of design is shown by the frequent recurrence of similar forms in a series of chipped flints, but the Professor holds that "the design is in the selection of accidental forms, not in the manufacture of serviceable implements."<sup>2</sup>

As further evidence of the keen interest which is at present taken in the connexion between geological and archæological topics, I may refer to the address which our valued Fellow, Dr. Robert Munro, delivered last July before the Anti-quarian Section of the Royal Archæological Institute at the local meeting at Lancaster. In this able discourse on "The Relation between Archæology, Chronology and Land Oscillations in Post-Glacial Times," the author discusses the connexion between variations of climate and the movements of the earth's crust in these latitudes since the Glacial Period. Assuming that a chronology can be established on an astronomical basis, he applies the results to the determination of the date of certain archæological phenomena; and it is interesting to find that the conclusions thus deduced fairly agree in certain cases with those obtained by calculations based on evidence of quite a different character. Dr. Munro finds much to support his views in the remarkable researches of Dr. Nüesch at the Schweizersbild, near Schaffhausen.

At the rock-shelter of the Schweizersbild, a gravel bed, of fluvio-glacial origin, is covered by a deposit enclosing the remains of an Arctic fauna, which Dr. Nehring shows to be characteristic of the Tundras, or treeless wastes of Arctic lands. Whilst this was in course of accumulation palæolithic man took refuge in the shelter, and has left there such relics as would be referred in the French caves to the so-called "Reindeer period." A yellow-stained bed above this Arctic

<sup>1</sup> *Quart. Journ. Geol. Soc.*, vol. liv, 1898, p. 291.

<sup>2</sup> *The Arch. Journ.*, vol. liv, 1897, p. 362.

deposit is rich in relics referable to the latter phase of the reindeer age, associated with a sub-Arctic fauna which Nehring correlates with that of the steppes. In the overlying layer, or "breccia-bed," a gradual transition may be traced from the steppe conditions to those of the Forest period; the cold, dry climate of the steppes giving way to a milder and damper climate, favourable to forest-growth, and leading upwards to deposits of the Neolithic period, with remains of *Bos longifrons* and other neolithic types. Dr. Nüesch fixes the earliest appearance of man in this district at not less than 20,000 and not more than 29,000 years ago.<sup>1</sup>

To those who have not watched the recent course of geological opinion on the physical conditions which probably prevailed during the Palæolithic period, Dr. Nüesch's frequent reference to the "steppe fauna" may perhaps need a word of explanation. It may therefore be useful to remark that—as a consequence of the researches of Nehring, Liebe, Woldrich, Engler, and other workers—an opinion has been gaining ground among geologists that the Glacial epoch was succeeded in parts of the northern hemisphere by a period of dry cold, when the climate of Central Europe must have borne much resemblance to that of the arid wastes of Central Asia at the present day. This age is sometimes called the "Steppe period." The curious deposit known as loess, so extensively distributed over the northern part of China, was described many years ago by Baron Von Richthofen, at present the distinguished Professor of Geography in Berlin, as an æolian deposit, formed of dry dust, blown from the deserts of Central Asia. Similar loess occurs widely spread over parts of Europe, forming an unstratified deposit of yellowish loam, probably derived in large measure from glacial mud, with numerous land-shells and mammalian bones. Professor Alfred Nehring, of Berlin, after a careful study of the loess fauna, some years ago pointed out its relation to that of the steppes.

In this country, so near to the western seas, it is hardly to be expected that we should find any accumulation of wind-wafted desert dust; but it is of extreme interest to find relics of the steppe fauna even in Britain. In the lists of pleistocene mammals from our bone-caves and river-drifts, published many years ago by Professor Boyd Dawkins, in several of his valuable writings, there may be found many steppe animals duly recorded. Mr. E. T. Newton's careful study of the mammalian remains from the fissures in the Kentish Rag of Ightham, in Kent, so skilfully explored a few years ago by Mr. J. Lewis Abbott, has shown the presence in the south-east of England of a fauna containing, with many Arctic forms, certain sub-Arctic species pointing unmistakably to steppe conditions. Then again, part of the skull of the Saiga antelope, a most characteristic member of the steppe fauna, was found a short time ago at Twickenham by Dr. Leeson, and has been described by Mr. A. Smith Woodward. Such discoveries go far to

<sup>1</sup> *The Arch. Journ.*, vol. lv, 1898, p. 259. It may be mentioned that an excellent description of the rock-shelter at the Schweizersbild, by Professor James Geikie, will be found in the *Scottish Geographical Magazine* of September, 1897. (Vol. xiii, p. 466.)

substantiate the views of my colleague, Mr. Clement Reid, who very ably argued long ago in favour of the former existence of a steppe climate in Britain.

As anthropologists, it is interesting to recall the fact that the former westward extension of the conditions now prevailing in the Eastern steppes, was pointed out by Dr. Woldřich, of Prague, as far back as 1882, in a paper read before the Anthropological Society of Vienna, and published in the second volume of the Society's *Mittheilungen*. Other papers on the subject, printed elsewhere, are of yet earlier date.

So commonly received has this view now become that we find Mr. J. E. Marr, of Cambridge, in an excellent geological text-book, published a few weeks ago, recognising in late Tertiary times, first a Glacial period, then a Steppe period, and afterwards a Forest period; and he says, "roughly speaking the Steppe period corresponds with the period during which Palæolithic man existed, at any rate in north-west Europe."

It appears then highly probable that on the amelioration of climate at the close of the Great Ice Age, when the glaciers and the ice-fields melted away, an Arctic fauna was gradually displaced by a sub-Arctic fauna, resembling that of the steppes; the dry climate then slowly gave way to a humid climate favouring the growth of arborescent vegetation, and leading to a great development of forest growth during the Neolithic period.

One of the most distinguished Fellows of this Institute, Sir Henry Howorth, F.R.S., who takes so keen an interest in the relation between Geology and Anthropology, has suggested in the pages of *Natural Science* a new scheme for grouping and naming the subærial post-pliocene deposits of this country.<sup>1</sup> He uses the term *Anthropozoic* as a convenient designation for all the deposits from the base of the Cromer Forest-bed upwards, because he believes that they form a group "marked by the presence of Man and his works *all through*, and that Man is in effect a very good type-animal by which to ear-mark the series." It will thus be seen that Sir Henry accepts the evidence of the existence of man in this area during the period of the Norfolk Forest-bed. The separation of the human period into two divisions is generally admitted, but objecting to the terms palæolithic and neolithic, he proposes others based on the character of the animal-life of the period. As the earlier phase is characterised by the presence of wild animals only, and the latter by the existence of domesticated species, Sir Henry proposes to term them respectively *Theriozoic* and *Himerozoic*.

The Theriozoic period is itself divisible into two stages. In the older stage we find such extinct mammalia as *Elephas meridionalis*, *Rhinoceros etruscus*, *Ursus arvernensis*, *Trigonotherium Cuvieri*, and a series of extinct deer. The latter part of the Theriozoic period is characterised by the introduction of the reindeer and by certain steppe animals, like the Saiga antelope. Then, passing upwards through the Drift, into the deposits of Himerozoic age, Sir Henry Howorth suggests a

<sup>1</sup> "A New Scheme of Geological Arrangement and Nomenclature." Part IV. *Natural Science*, April, 1898, pp. 261-270.

division into two groups according as they are pre-Roman or post-Roman; the coming of the Romans into the British area being accepted as an event sufficiently important to represent a break in the classificatory system.

The difficult question as to the apparent gap between the palæolithic and neolithic periods, which has been so ably discussed in this country by Professor Boyd Dawkins, Dr. Munro, Mr. Arthur J. Evans, Mr. Allen Brown, and others, has been also a subject of much discussion recently on the Continent. My friend, M. Rutot, the accomplished Curator of the Royal Natural History Museum in Brussels, who has given much study to the later geological deposits in Belgium, published, a short time ago, his belief that no hiatus exists there, but that the Belgian area has been continuously inhabited by man since palæolithic times.\*

It is a welcome sign of the progress of anthropological studies that one of our most ancient seats of learning should have organized an expedition such as that which left Cambridge in the early part of last year, under Professor Haddon. From a letter published in *Nature* (December 22) we learn that at the time the communication was despatched, last November, the investigation in Torres Strait had been completed; that a contingent had made a scientific trip to New Guinea, and that several of the members had proceeded to Borneo to study the anthropology of the Baram District of Sarawak. The Murray Islanders, with whom the Rev. Mr. Hunt's paper in the last part of our *Journal* has already made us acquainted, were studied in great detail; and as these have been, by reason of their isolation, less modified by contact with alien races than is usually the case, their study seems to have peculiar importance. As the expedition was furnished with the latest scientific appliances, we may expect that information will be brought home of an exceptionally interesting character.

The pressing necessity of instituting careful anthropological researches among uncultured peoples is every day becoming more evident. By contact with the missionary, the merchant, and the miner, these peoples are rapidly losing their primitive condition, and our opportunities of observation are consequently becoming more and more contracted. While rejoicing at the progress of civilization, the anthropologist feels that the dark places of the earth are precisely those places most likely to throw light upon many problems of the prehistoric past. Hence his keen interest in all exploratory work, provided he is assured that the explorers are competent to observe with scientific accuracy and willing to record their observations without distortion. The Cambridge expedition is in these and other respects a model which, it is hoped, may be copied in other quarters.

Anthropological science is further indebted to our esteemed member, Professor Haddon, for having recently contributed to "The Progressive Science Series" a

\* "Les conditions d'existence de l'homme et les traces de sa présence au travers des temps quaternaires et des temps modernes en Belgique." *Bulletin de la Société d'Anthropologie de Bruxelles*, tome xvi, 1897-98.

volume on *The Study of Man*. The skilful and attractive manner in which he presents the study ought to enlist the sympathy of many who might be repelled by a more formal treatise; and it may be hoped that his "Practical Suggestions for Conducting Ethnographical Investigations in the British Islands" will be the means of securing observations of substantial value to science. Every honest attempt to bring a knowledge of anthropology and its methods before the public ought to receive a hearty welcome at this Institute.

In the *Proceedings of the Royal Irish Academy* for last December,<sup>1</sup> Dr. Charles R. Browne has published the results of his ethnographic survey of Clare Island and Inishturk—two islands at the mouth of Clew Bay in co. Mayo. This investigation formed the fifth of the local ethnographic surveys, which are now conducted annually as a part of the work of the Anthropological Laboratory at Trinity College, Dublin.

The people examined are described as presenting, on the whole, the same physical types as those of the opposite coasts of Mayo; but, as is to be expected in the case of islands, there is more uniformity in their appearance. It is believed that there has been no great change in the composition of the population during the last three or four centuries, and that the bulk of the people are descended from the ancient inhabitants of this part of Connaught.

Those who had the advantage of hearing Professor Baldwin Spencer's admirable address in this room during his short visit to England in December, will expect to find a work of exceptional merit in the volume on *The Native Tribes of Central Australia*, with which he has just enriched the literature of anthropology. Professor Spencer has been associated in the preparation of this work with his friend Mr. F. J. Gillen, whose long residence in Central Australia has given him a knowledge of the natives perhaps unequalled. Mr. Gillen's observations and Professor Spencer's scientific deductions have combined to produce, in my opinion, one of the most valuable works which have lately found their way to the library of the anthropologist.

Among the recent publications in this country tending to stimulate the study of anthropology among the people, mention should be made of Mr. A. J. Butler's translation of Professor Ratzel's *Völkerkunde*. Under the title of *The History of Mankind*, the work has been issued in serial form, extending over a space of between two and three years. Now that it is completed it forms three handsome volumes, richly illustrated, and having its value enhanced by an Introduction contributed by Professor E. B. Tylor, F.R.S. By the publication of popular works of this kind the Institute becomes more or less benefited, inasmuch as they tend to quicken an interest in the science and increase the number of those who sympathise with our objects.

<sup>1</sup> "The Ethnography of Clare Island and Inishturk, co. Mayo." By Charles R. Browne, M.D. *Proc. R. Ir. Ac.*, 3rd series, vol. v, No. 1, December, 1898, pp. 40-72.

At the summer meeting of the London Society for the Extension of University Teaching, held last spring at the University of London, Sir John Evans, F.R.S. popularised the subject of prehistoric archaeology by delivering an admirable lecture on "London before the Saxons," in which he dealt with prehistoric man in the south-east of England.

This Institute always views with much interest the proceedings of the British Association, and it is therefore satisfactory to refer to the brilliant session of 1898, where anthropology was so ably cared for under the presidency of Mr. Brabrook, C.B. I find myself relieved, however, from the necessity of dealing in detail with any part of the proceedings at Bristol, since Mr. Myres has contributed to our *Journal* a masterly epitome of the anthropological work of the session. It may be noted with satisfaction that the money grants to committees entrusted with work of an anthropological character reached the substantial sum of £200. From some of these Committees, such as that on the Teaching of Anthropology, under the chairmanship of Professor Tylor, much good work may be expected.

Reference was made by my predecessor last year to the possibility of bringing the Anthropological Institute into closer relationship with the Folk-Lore Society. To that end a joint committee was appointed, but as its deliberations are still pending, it would be premature to refer to them in this place. Whatever may be the ultimate result—whether the two Societies agree to amalgamate, to co-operate or to maintain their present individualities—it will not be out of place, I think, for the Anthropological Institute on this occasion to offer its congratulations to the Folk-Lore Society on the attainment of its majority. When the Society was founded, 21 years ago, Sir John Evans welcomed it from this chair; and its growth and development have fully justified the prediction which he made as to its usefulness in a special sphere of anthropological study.

As an indication of the growing interest in anthropological science on the Continent, it is pleasant to record the foundation of another Society for its cultivation. On the 30th of April, 1898, was founded in Holland the *Nederlandsche Anthropologische Vereeniging*, a Society for the study and advancement of anthropology in its widest sense. The first President is Dr. C. Winckler, Professor in the Medical Faculty of the University of Amsterdam; the Vice-President is our Honorary Fellow Dr. Eugene Dubois, who has been appointed Professor of Geology in the same University; the Secretary is Dr. J. Sasse, of Zaandam; and the Treasurer Dr. Kerbert, Director of the Zoological Gardens in Amsterdam. To the young Society we venture to offer our best wishes for a vigorous growth and a successful career.

Before bringing these desultory remarks to a conclusion, it becomes my melancholy duty to refer to the losses which our Institute has suffered during the past year by the death of several of its prominent members.

The RIGHT HONOURABLE SIR GEORGE GREY, F.R.S., who passed away at the

ripe age of eighty-six, was one of our original Fellows, having been a life-member of the pre-existing Ethnological Society, to which he was elected as far back as 1860, and whence he passed to the Anthropological Institute at its formation. Without referring to his remarkable career as a bold and successful Colonial Administrator, it is sufficient here to recall briefly his services to anthropology. In whatever distant part of the Empire Sir G. Grey found himself officially located, he turned sympathetically to the native races, studying with keen interest their language, their character, customs and mythology. The natives, in turn, recognized the genuine interest which he took in their welfare, and cheerfully gave him their confidence and in many cases an extraordinary measure of devotion. More than half-a-century ago, when hurriedly despatched to New Zealand at a crisis of imminent peril, he not only reconciled the Maories but by his tact and justice rapidly gained their respect, which eventually ripened into real affection. Unaided by dictionary or grammar, he acquired a marvellous command of their language; and in 1855 published his valuable work on *Polynesian Mythology and Traditions of New Zealand*, a work which was followed, three years afterwards, by his *Proverbial Sayings of the New Zealand Race*. In South Africa, too, his influence with the native races was almost equally remarkable. Nor should his early exploratory work in Australia be forgotten. As far back as 1841 Sir G. Grey published his *Journals of Discovery in Australia*, a volume which had at the time much ethnological interest. Our own *Journal* unfortunately does not contain many communications from his pen; but when in England he was occasionally present at our meetings, and I well remember his joining in our discussions. Sir George Grey died at Kensington on September 19, and was buried in St. Paul's Cathedral, with such honour as was due to one who had by his personal power contributed so largely to the building up of the British Empire in the Seas of the South.

By the death of SIR HENRY PEEK, BART., the Anthropological Institute has lost a valued friend, who took a genuine interest in its proceedings, and who will be remembered as having been, in recent years, a frequent attendant at our meetings. The death occurred during the summer recess, but the Council on reassembling took the earliest possible opportunity of recording its sense of the loss which the Institute had suffered, and of offering its respectful sympathy with his son, Sir Cuthbert Peek, to whose services the Institute has been in many ways so signally indebted.

Unfortunately there has recently dropped from our roll of Fellows the name of MAJOR-GENERAL ROBERT GOSSETT WOODTHORPE, C.B., R.E.—an original observer of rare ability—who passed away last May at the age of only fifty-three. His explorations on the northern and eastern border of India brought him into contact with the frontier tribes, and our *Journal* testifies to his intimate knowledge of the wild people of the Naga Hills. In the early part of his career he served successively in the Lushai Expeditionary Force (1871-72), in the Garo Hill Expedition (1872-73), and in the Naga Field Force (1875-76). Subsequently he distinguished him-

self in the Afghan Campaign under General (now Lord) Roberts. Among other incidents in Woodthorpe's varied career may be mentioned the part he took in exploring a part of the basin of the Irrawadi River: he was afterwards attached to the mission to the Pamirs and Badakshan: at one time he had charge of the Intelligence Department at Simla: he conducted the surveys for the Anglo-Siamese Boundary Commission, and he subsequently had command of the Mekong Commission Survey. His last contribution to this Institute was a valuable paper on the "Shans and Hill-tribes of States on the Mekong." At the time of his death he was at Calcutta, acting as Deputy-Surveyor-General. In General Woodthorpe great skill as a surveyor was coupled with much talent as a draughtsman, and many of his sketches have been reproduced in our *Journal*. A man of great scientific ability, his explorations added much to our knowledge of geography and ethnography, whilst his charm of disposition endeared him to all who had the advantage of personal relations with him. An appreciative memoir, from the pen of his friend Sir Thomas Holdich, will be found in the *Geographical Journal* for last August, where an excellent portrait serves to recall the genial features which those of us who knew him would not willingly allow to fade from our memory.

It is with unfeigned regret that I have to include in the list of members who have recently passed away in the course of nature, the name of MISS ANNE WALLBANK BUCKLAND. At a Special Meeting of this Institute held on March 9, 1875, a proposition, introduced, if I remember rightly, by General Pitt-Rivers, to admit ladies as members, was carried; and Miss Buckland was not slow to avail herself of the privilege of admission. For some three-and-twenty years her name has consequently been standing on our roll of Fellows. Nor was her membership a mere formal matter. The keen interest which Miss Buckland took in all branches of anthropology attracted her to our meetings, where—as well as the anthropological section of the British Association—she was a regular attendant, accompanied by her devoted friend Mrs. Carey-Hobson. Ever ready to take an active part in our discussions, Miss Buckland will long be remembered in this Institute; whilst successive volumes of our *Journal* bear ample testimony to her devotion to the science, and her desire to elucidate some of its perplexing problems. The industry with which she wielded her skilful pen may be seen in her essays on such varied subjects as primitive agriculture, prehistoric monuments, serpent-worship, rhabdomancy and belomancy, the mythology of birds, tattooing, neolithic surgery, the use of stimulants among savages, prehistoric intercourse between the West and the East, etc. Under the title of *Anthropological Studies*, Miss Buckland published, in 1891, a work which consisted chiefly of essays which she had contributed to our *Journal* and to the *Westminster Review*; and it is pleasing to recall the fact that the volume in question bears a dedication "to the President, Vice-Presidents, and Council of the Anthropological Institute of Great Britain and Ireland." At the time of her decease Miss Buckland was engaged upon the preparation of another anthropological volume, to be entitled *Fossils of a Vanishing Faith, or Necromantic Survivals*. No other lady in this country has, to my know-

ledge, done so much to popularize anthropology as was accomplished by our valued friend; and it was, to many of us, a matter of profound satisfaction when, in consideration of her services, she was placed a few years ago on the Civil List. Miss Buckland unhappily did not long enjoy her pension. She died at her residence at West Kensington on January 4th, at the age of sixty-seven.

Turning to our List of Honorary Fellows, it is my painful duty to record the death of PROFESSOR DE MORTILLET, who was known personally to many of us. Louis Laurent Gabriel De Mortillet was born at Meylan, in the Department of Isère, on August 29, 1821, and had therefore reached, at the time of his decease, the seventy-seventh year of his age. After much scientific work in early life, connected with geology and conchology, he rendered conspicuous service at the Paris Exhibition of 1867 by his organization of the Prehistoric Section. Soon afterwards he was appointed to the charge of the famous museum at Saint-Germain-en-Laye. Mortillet was one of the first Professors at the School of Anthropology founded by Broca; he was a past-president of the Anthropological Society of Paris, and a copious contributor to the Society's *Bulletin*. Without reciting the titles of his numerous publications, it is sufficient here to recall his two works entitled *Le Musée préhistorique* (1881) and *Le Préhistorique* (1883). It should be added that he founded, in 1864, the useful review known as the *Matériaux pour l'histoire primitive et naturelle de l'homme*, and twenty years later another serial entitled *L'Homme*, both of which became merged in *L'Anthropologie*. Professor De Mortillet was a man of extraordinary energy, who had, in his day, played many parts, having been not only a man of science, but a man of affairs and an active politician.<sup>1</sup>

Our roll of Honorary Fellows has been further impoverished by the loss of so distinguished a name as that of PROFESSOR HERMANN WELCKER, of Halle. Although he died on September 11, 1897, I may be pardoned for referring to him in this place, inasmuch as the death accidentally escaped record last year. Dr. Welcker will be remembered by his numerous original contributions to physical anthropology, especially by his study of the skull. He co-operated with Professors Ecker and Lindenschmidt and other anthropologists in founding, in 1866, the *Archiv für Anthropologie*, a journal which he enriched by a number of valuable papers; his last essay having been published there last spring, as a posthumous paper. Professor Welcker, at the time of his death, was in the seventy-sixth year of his age.

Before stepping down from the position to which your suffrages elevated me a year ago, I desire to acknowledge in most grateful terms the indulgence with which you have tolerated my own shortcomings in the conduct of our affairs, to no one more painfully evident than to myself. I am also anxious to take this opportunity of expressing my sense of obligation to those who have officially assisted me in the

<sup>1</sup> The eloquent tributes to Mortillet's genius, pronounced by M. Hervé and Dr. Capitan at the first meeting of the Anthropological Science of Paris after the autumn recess, were published in the *Bulletin* after this sketch was written.

management of our business;—to the Council and its various Committees for loyal support; and to the Treasurer, the Secretary and the Assistant Secretary for their efficient aid. Nor should I omit to acknowledge my indebtedness to Dr. Garson for the valuable work which he has personally carried on in our Library, and for the assistance which he has so frequently rendered at our evening meetings by his skilful manipulation of the lantern, when optical illustrations have been needed.

It is with peculiar gratification that I now find myself privileged to transfer my trust to the custody of one who has for so many years, and in such a variety of ways, rendered conspicuous service to our Institute. Mindful of Mr. Read's wealth of knowledge and readiness of resource, coupled with his geniality of disposition, I feel abundantly justified in predicting that his occupancy of this chair will be marked by exceptional ability and activity. His official position as custodian of our national collections illustrative of Ethnography and Prehistoric Archaeology, gives him unrivalled opportunity of accumulating information with regard to these important branches of Anthropology, whilst it brings him into immediate relation with the most recent explorers, from whom original communications for our meetings may be obtained. It is therefore with much reason that I hail Mr. Read's accession to the office of President as an event likely to inaugurate an era of prosperity to the Institute. There is, in my opinion, a potential power in this Society which has never yet been realized; but I look forward to the time, which I think need not be far distant, when its fine possibilities shall be developed; when the Anthropological Institute, under able management, shall take that position to which it is fairly entitled by the importance of its studies, and when it shall step into the front rank of the Societies of the British Empire—at once an honour to the Science of our country and a valued servant to the State.

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## ANTHROPOLOGICAL REVIEWS AND MISCELLANEA.

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*Readers of the Journal are invited to communicate any new facts of especial interest which come under their notice. Short abstracts of, or extracts from, letters will be published at the discretion of the Editor. Letters should be marked "Miscellanea" and addressed to The Secretary, 3, Hanover Square, W.*

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### ETHNOLOGY OF CORNWALL.

The following letter has been addressed to me by my distinguished friend Dr. Paul Topinard, who desires to publish it in the *Journal of the Institute*. It contains his impressions as to the prevailing physical types which he found in Cornwall, during a short visit which he made to that county last September. As he desires my comments I add them hereto.

Dr. Topinard sees little difference between the Cornish and other Englishmen, so far as physical type is concerned. This does not surprise me, though I do not quite agree with him. An English observer, like myself, accustomed to English types, naturally has his attention directed on visiting Cornwall, to those persons, be they many or few, who present *un-English* types, rather than to those, however numerous, who have a familiar aspect. The Cornish do not differ materially in cephalic index from other Englishmen; and no doubt the points of likeness are more numerous than those of divergence, and must necessarily strike a foreign anthropologist forcibly.

My own analysis of the Cornish population would be, I think, as follows:

1. The Neolithic race of Britain, which we have got into the habit of calling Iberian. In Cornwall, I think, there are traces of Phœnician or other Semitic admixture.
2. The British or bronze brachykephal, much more in evidence in Cornwall than, for example, in Wiltshire. I account for this by the recession of the military caste before the invading Saxons, such military caste having retained most of the original brachycephalic element.
3. The Saxon or other Teutonic invaders and settlers.

The physical type which most strikes my eye in Cornwall is the first-named, crossed by the second, and thus improved in stature and general vigour of aspect. The complexion is largely derived from the first.

The short, sturdy, round-faced type so prevalent in Devon, but less so in Cornwall, is always a puzzle to me. Is it merely a modification of the ordinary English "Batavian" type? What is its relation to Dr. Topinard's Pont l'Abbé type? Does it descend from the old Damnonians? Was it reinforced from Bretagne after the conquest? I cannot tell.

JOHN BEDDOE.

TO DR. JOHN BEDDOE.<sup>1</sup>

Dear Sir,

I must tell you the results of the trip which I made to the Land's End, Cornwall, after the Meeting of the British Association at Bristol. I visited particularly two of the villages which you pointed out to me, Newlyn and Mousehole, and also another, St. Ives.

My purpose, as you know, was to compare the anthropological types I should find with those, four in number, which I had previously ascertained in Bretagne, and described in a letter to Dr. Garson, published in the *Journal of the Anthropological Institute*, vol. xxviii, 1897, p. 99. Those four types of Bretagne were: 1st. A dark, short, good-looking type which is found principally in the centre of the peninsula, and which I consider as the descendant of one of the three races of the Neolithic period, the one which itself descends from the principal race of the Palæolithic period, both known in France under the name of the Mediterranean race, or, as you say in England, of the Iberian race. 2nd. A fair and tall type with blue eyes, blond hair, and a reddish complexion, which came during the 5th century principally, I do not say entirely, from the other side of the Channel. 3rd. A brachycephalous type with a big head, a rather flattened and unpleasant face, a short neck, square shoulders and trunk, etc., found, for example, among the Bigoudens of Pont l'Abbé, and descending from the brachycephalous race of the Neolithic period. 4th. A type of moderate stature with a long, quadrilateral, somewhat flattened and phænozygous face, a square and full forehead, square jaws and chin, etc.; this type being the most numerous, being found principally at the periphery of the country, and being the result of crossing between the 2nd and 3rd types mostly, if not entirely.

Well, in Cornwall I found nothing reminding me of the 1st and 4th types, but some characters of the 3rd type in a few individuals, and many people of the 2nd. My conclusion was that the population of Cornwall is now thoroughly English in type.

Nevertheless, I found that the average was less fair, less blue-eyed, less long-faced, less tall than in other parts of England. We cannot ascribe those differences to the British who were repulsed into Cornwall by the Anglo-Saxons, because we know not if there was any physical difference between those British and the Anglo-Saxons, the ones speaking a Kymric language and the others a Teutonic language. The probability is that the present type of Cornwall comes from the crossing of a fair people, either British or Anglo-Saxon, or more likely both, with an anterior dark population which was the Silures, who worked the tin mines of Land's End, as said by the writers of antiquity. If so, I ought to have found some vestiges of my 1st type of Bretagne, which was akin to the Silures. It is to be sought for by some other observer who can devote more time than I did.

Now, accepting the hypothesis that the British, and not the Anglo-Saxons, played their part in the formation of the present type of Cornwall, and comparing this with the most expanded present type of Bretagne, my 4th, one might say that the very great difference between the two finds its explanation in this: The British of Bretagne were crossed mostly with a brachycephalous population, and those of Cornwall with a dark and short population of Silures.

I submit these views to you: none have more authority to give them their proper weight.

I remain, yours most faithfully,

DR. PAUL TOPINARD.

Paris, November 12th, 1898.

NEW SERIES, VOL. I, NOS. 3 AND 4.

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## CONFUSION IN GEOGRAPHICAL NAMES.

At a meeting of the Berlin Anthropological Society held on the 16th July, 1898, Professor F. Von Luschan discussed the question of geographical nomenclature in European Colonial possessions, with especial reference to the South Seas. Patriotic enthusiasm has recently prompted explorers and administrators to associate the names of prominent countrymen, or of European provinces and towns, with islands, mountains and harbours in the Pacific Ocean. Such a procedure can only be justified where a recognized name, native or other, can not be shown to exist. Where the contrary is the case the rightful name is capriciously set aside to the complication of geographical and ethnological study, and to the confusion of the investigator. To re-christen as "New Pomerania" an island known for two hundred years as "New Britain" is to place an arbitrary difficulty in the way of the scientific enquirer and to remove one of the minor landmarks of history. This is but one example of a practice which increases year by year; and if it is to continue, the student will be ultimately compelled to treat the older books and maps as if they were written in cipher, and to consult them with the key in his hand. Nor will the inconvenience be confined to science alone, for it must inevitably react upon commercial enterprise.

Although Professor Von Luschan's remarks are principally concerned with German Territories, he rightly points out that his countrymen are not the only offenders. The re-christening mania flourishes in the British Empire, and Englishmen and Germans can condemn it with perfect impartiality, for where both are offenders the susceptibilities of neither need be wounded by a salutary reform.

In view of the wide-spread nature of the abuse, Professor Von Luschan is anxious that practical measures should be promptly taken to check its further growth. He suggests that the meeting of the Geographical Congress at Berlin in the course of the present summer would be a favourable occasion to bring the whole question forward. Meanwhile he proposes the following rules to indicate the main lines which reform ought to follow:—

1. Wherever possible the native name should be retained.
2. Where satisfactory native names cannot be found, those given by the first European discoverers should be retained.

As it is probable that Professor Von Luschan's views are shared by most geographers and ethnologists in these islands, it is to be hoped that they will receive the support of the British Delegates at the Congress.

At the meeting of the Council of the Anthropological Institute on February 11th, 1899, the following Resolution in connection with this matter was passed:—

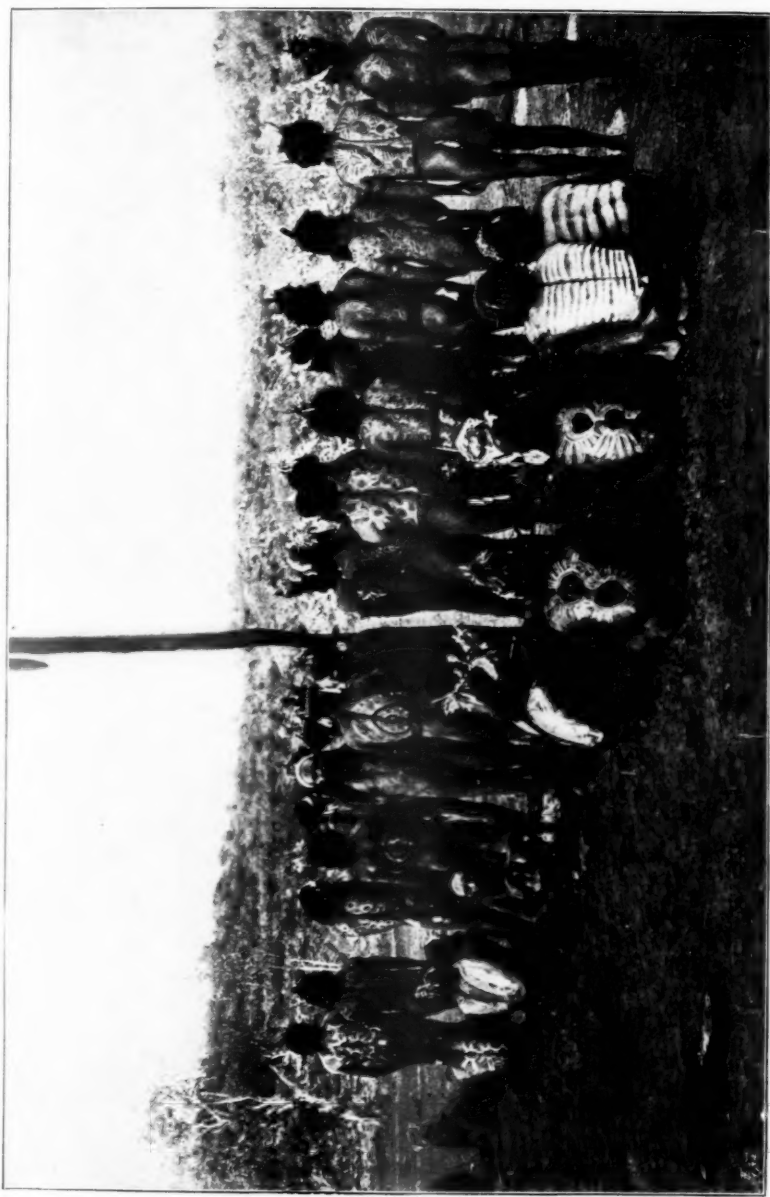
"The Council of the Anthropological Institute of Great Britain and Ireland endorses the recommendation of Professor Von Luschan with regard to geographical nomenclature in Colonial possessions and uncivilized countries as set out in his paper read before the Berlin Anthropological Society on 16th July, 1898, believing that such rules will not only be a great convenience to geographers and other scientific men, but will be of considerable practical value in commerce."

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THE NATIVE TRIBES OF CENTRAL AUSTRALIA. By Baldwin Spencer, M.A., and F. J. Gillen. London: Macmillan and Co., Limited, 1899.

[WITH PLATES XXV TO XXVII.]

Several references to this work in the earlier pages of the *Journal* (pp. 280, 281, 322) bear testimony to its high scientific value. Professor Baldwin Spencer, the distinguished Professor of Biology in the University of Melbourne, has fortunately



TOTEMIC DESIGNS ON BACKS OF MEN UNDERGOING INITIATION.





FIG. 2.—WOMAN THROWING CHARMED STICK.

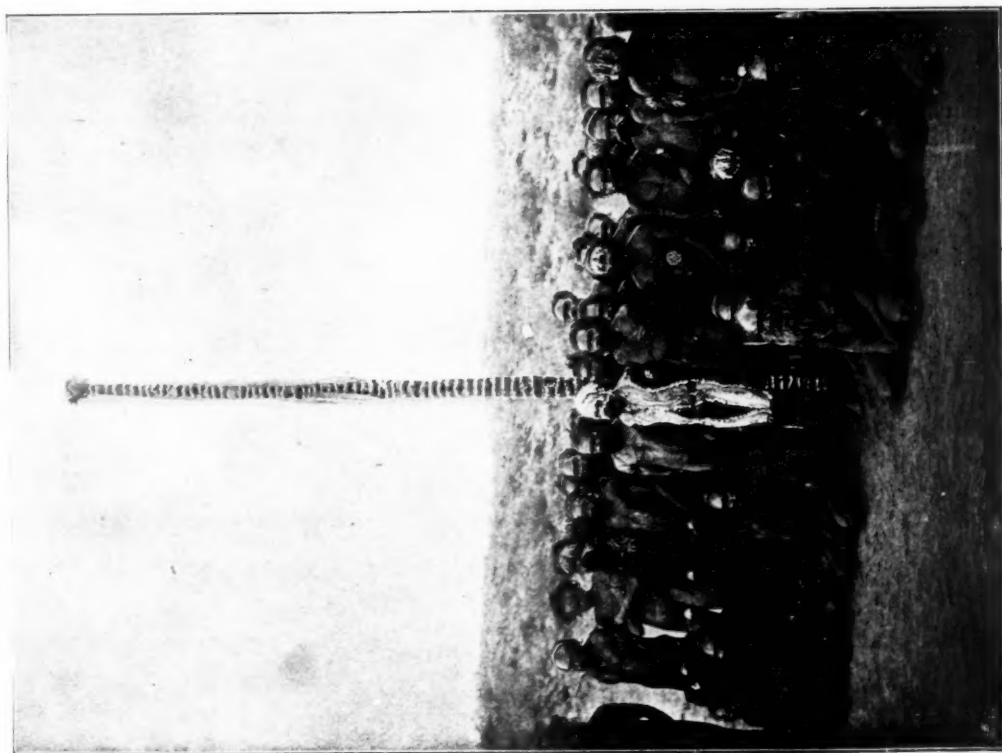


FIG. 1.—CEREMONY OF A KANGAROO TOTEM.





FIG. 1.—AVENGER OF BLOOD CREEPING TO HIS FOE.



FIG. 2.—FIRE-MAKING BY FRICTION OF SPEAR-THROWER ON SHIELD.



associated himself in the preparation of the work with Mr. Gillen, the special magistrate and sub-protector of the Aborigines at Alice Springs. The tribes described by these able observers occupy a large area of steppe and desert land, difficult of access, in the very heart of Australia.

The authors describe the physical characters of the people, and devote a chapter to their clothing, weapons, implements and decorative art. But the special value of the work lies in the discussion of the social organisation and totemic system of the tribes, and in the detailed description of their ceremonies, especially those concerned with initiation. Both authors are fully initiated members of the Arunta tribe. During the summer of 1896-97, there was a great gathering of natives at Alice Springs for an important series of the ceremonies known as the *Engwura*, which occupied more than three months. These rites were witnessed by the authors, and are here described and illustrated with great fulness. The ceremonies connected with marriage and burial, and the various rites of magic also receive description; whilst the native folk-lore is by no means neglected.

Messrs. Spencer and Gillen's valuable work is copiously illustrated, largely from original photographs; and by the courtesy of the publishers, Messrs. Macmillan, a selection of the illustrations appears in Plates XXV to XXVII.

*Explanation of Plates XXV to XXVII.*

*Plate XXV.*

Group of Ilpongwurra, or young men undergoing the Engwura ceremony of initiation. On their backs totemic designs have been painted with charcoal, red ochre, yellow ochre, white pipe-clay and grey wad, or oxide of manganese.

*Plate XXVI.*

Fig. 1.—Ceremony of the Kangaroo totem of Undiara, near the Finke River at Henbury.

The pole, or *nurtunja*, here represented was made of 20 long spears lashed together, and reached a height of 18 feet. Fourteen *churinga* or sacred objects were attached to it. The spears in such poles are swathed in grass-stalks, bound with hair-string. The pole carries at the top a bunch of feathers, and is ornamented with transverse rings of birds' down, fastened on by means of congealed blood.

Fig. 2.—Illapurinja woman, or avenger of wrong, throwing a charmed stick at an enemy. The

body of the woman is rubbed over with grease and red ochre, and decorated with white down fixed on with blood drawn from her husband. Her head is ornamented with rings and tufts of tail tips. In her left hand she carries a fighting club, decorated at the ends with down; whilst in her raised right hand is a large wooden *churinga*, specially made by her husband.

*Plate XXVII.*

Fig. 1.—Kurdaitcha man, or avenger of blood, creeping up to his foe. He wears shoes made

of emu feathers, matted together with human blood, and tied to the feet with string of human hair. On his head is a small conical helmet formed of twigs and fastened on with hair string. Lines of down run across the front of the helmet, along the side of the face, and down the front of the body and legs as far as the knees. Between his teeth he holds a small sacred stone, or *churinga*. In his right hand is the spear with which he will attack his enemy, whilst his left hand holds a shield and a few wooden *churinga*.

Fig. 2.—Illustration of the method of fire-making by rubbing the edge of a spear-thrower backwards and forwards upon a shield of soft wood. The friction produces heat

enough to char the light wood and bring it to a state of glow, when careful blowing fans it into a flame. This is the process mostly employed for obtaining fire by the Arunta, Ilpirra and Luritcha tribes.

SPINIFEX AND SAND: A NARRATIVE OF FIVE YEARS' PIONEERING AND EXPLORATION IN WESTERN AUSTRALIA. By the Hon. David W. Carnegie. London: C. Arthur Pearson, Limited, 1898.

[WITH PLATE XXVIII.]

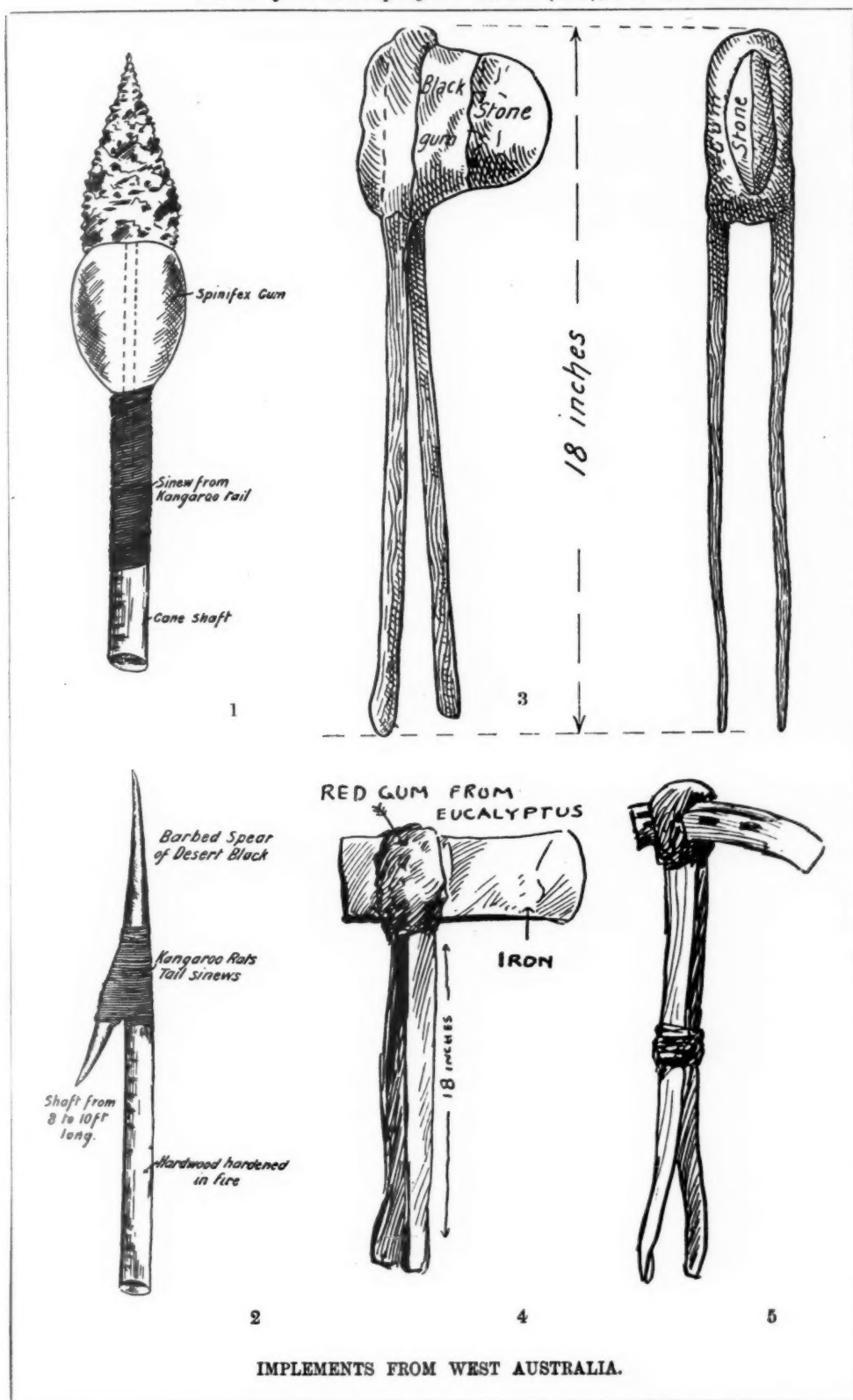
Though the vast tract of country known as West Australia contains much land on or near its coast either occupied by settlers or fit for occupation, a still larger area towards its eastern boundary is, and is likely to remain, desert. In other words, it consists of the "Spinifex and Sand," which form the title of Mr. Carnegie's extremely interesting book. Spinifex, the author remarks, has been called Porcupine Grass, *Triodia pungens*, and *Festuca irritans*. It grows "in round, isolated hummocks, one to three feet high; these hummocks are a dense mass of needle-like prickles, and from them grow tall blades of very coarse grass to a height of sometimes six feet." Camels and horses walking through it often suffer severely. And it forms a shelter for the kangaroo rat, which feeds upon its roots.

A sketch-map shows the routes taken by previous explorers. From it we learn that whereas earlier travellers crossed West Australia along lines having a generally east and west direction, Mr. Carnegie's course was nearly north and south, and lay almost entirely within the deserts. He remarks that the first aim of a party of Western Australian prospectors is to find not gold, but water. Last year we were told of a "water famine" in the east end of London, and learned that in certain districts there the inhabitants were reduced to some twenty gallons per head per diem. But in West Australia, where the prosperous town of Coolgardie now stands, there once stood an open forest dotted with the white tents and camps of diggers. With the thermometer at 100° in the shade, and amid clouds of dust, water was being sold at from a shilling to half-a-crown a gallon. Yet Coolgardie is many miles from the desert areas.

Within the desert, the chief, almost the only, anxiety of Mr. Carnegie and his party was to make sure of a supply of water sufficient to support existence in men and camels, allowing for the facts that camels can go many days without drinking and men without washing. But the supply obtainable from rock-holes or from digging in the sand was both extremely small in quantity and extremely bad in quality. On one occasion a native woman was caught, and she pointed out a rock-hole from which her party had got their water. The author adds (p. 232):—

"The bottom of the hole was filled in with dead sticks, leaves, the rotting bodies of birds and lizards, bones of rats and dingoes. Into this ghastly mass of filth I sank up to my middle, and never shall I forget the awful odour that arose as my feet stirred up the mess. Nevertheless, water was there, and thankful I was to find it even to drink it as it was. After half-an-hour's work in this stinking pit, sick from the combination of smells—distinguishable above every other being the all-pervading perfume of aborigines—I was rewarded by some twelve gallons of water, or more properly speaking, liquid."

Of course, in the desert the aborigines are very few in number, and their parties very small. Individuals were captured whenever possible, in order that the explorers might have the advantage of their knowledge of local wells. They were then released. In the Kimberley district, on the north, they were more numerous. In the settled





districts they like to loaf about near a squatter's station, living on the meat that is given them on killing days. Sometimes a smart boy is trained by a squatter or other white man, and becomes a useful servant about the station. Mr. Carnegie does not think that it would be of any use to set apart reserves for natives dispossessed of their hunting grounds by white settlers. For the natives "prefer to live a hand-to-mouth existence where food can be obtained without trouble, rather than retreat into another region where game abounds, and there continue their existence as wandering savages." He adds that round Hall's Creek, in the Kimberley district, there is always a camp of blacks, from twenty to one hundred in number, who live as best they can without hunting. They are a merry set of people there who often practise the "corroboree" or native dance, of which there is some account. A chapter is devoted to "some native weapons and ceremonial implements," figures of them being given. And the marriage laws of the aboriginals of Northern and Central Australia are briefly explained. The routes taken are illustrated by four maps, and by more than forty pictures of the persons, places, implements, etc., mentioned in the book. The publishers have obligingly lent blocks for the illustrations in Plate XXVIII. They represent a spear from the Kimberley district (Fig. 1); a barbed spear of the desert man (Fig. 2); a stone tomahawk from Sturt Creek (Fig. 3); and two iron tomahawks (Figs. 4 and 5).

Few explorations, if any, have ever been successfully carried out in which the difficulties were greater and more persistent, and in which success was more largely due to the cheerful fortitude with which the leader of the expedition inspired his followers, and to his kindly care for the welfare of every man and animal under his charge.

T. V. H.

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WEST AFRICAN STUDIES. By Mary H. Kingsley. Macmillan Co. 1899. Demy 8vo. pp. xxiv, 639. Maps and photographic illustrations. Price, 21s. net.

In these *Studies* Miss Kingsley has treated, more fully than was possible in her *Travels in West Africa*, a number of questions which are raised by the native populations and cultures of the West African coasts, and by the dealings of Europeans with them.

The first few chapters are of the nature of introductory scene-painting, presented in the graphic and unconventional language which distinguishes all Miss Kingsley's work; and largely consist, as the authoress confesses, of materials "crowded out" of her former book.

Of all the misconceptions on which popular knowledge of Africa is based, none perhaps is so inveterate as the use of the term "Negro" indifferently for the true Negro of West Africa, and for other black peoples of Africa, particularly for those which are wholly or mainly Bantu. Thanks partly to this confusion, partly to the physical difficulties so vividly depicted in these *Studies*, our knowledge of this stock has been mainly derived, until quite recently, from the accounts of earlier travellers who were saved from this particular error simply because their knowledge was limited to the West Coast. The great monographs of the late Sir Alfred Ellis on the Yoruba-speaking, Tshi-speaking, and Ewe-speaking groups, and a few other studies of particular peoples, have thrown, of course, much new light recently on many of the questions at issue; but these *Studies* themselves show only too clearly the great blanks in our knowledge.

The term "Fetish," like the term "Negro," has come to be used in an ambiguous sense, either for primitive religion in general, or for the cult of spirits embodied in

material objects: and Miss Kingsley has some cause for her protest,—though we fear that it comes too late,—against a source of confusion which will only increase as the true West African Fetish becomes more familiar. Previous writers, with imperfect knowledge of the complex ethnology of West Africa, have been too much inclined to group all data of West African religion together irrespective of place, and to generalise from all alike. Miss Kingsley distinguishes four principal schools of Fetish, and indicates the local circumstances and external influences under which they may severally have risen.

The chapter on the Law of Property in West Africa expands a paper read at the meeting of the British Association last year, and is peculiarly opportune in view of recent fiscal difficulties. We regret that Miss Kingsley's recent paper "On the Connection between Religion and Law in West Africa" has not been reprinted, like the chapter on Fishes, which also appeared in the *National Review*; and we may perhaps be permitted to hope that its reappearance is only delayed until a further instalment, on Criminal Law, which is promised in the preface to the *Studies*, is sufficiently advanced for publication.

The latter part of the book is mainly occupied with a detailed arraignment of the Crown Colony System and all its works, which it would be beyond our province to enter into here.

Miss Kingsley has been well advised in her reliance upon what must remain the first source of information about any distant country,—namely the experience of the European traders. Her account of early trade with West Africa presents the history of European, and particularly of French trade in a clear, if somewhat partial, fashion. And one of her principal services to ethnology will, we think, be found to have been that she has stated vigorously the claim of the trader to be consulted in West African questions, whether theoretical or practical. Business ability is not always associated with the gift of literary description, and it has usually been the fate of the men who really know one Negro from another, and the custom of one creek from that of the next, to carry their knowledge with them unpublished to the grave. It is therefore to be hoped that the example set by the publication of the two papers, by experienced traders, which are appended to these *Studies*, may be speedily followed by other West African specialists.

J. L. M.

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THE PRE- AND PROTO-HISTORIC FINNS, BOTH EASTERN AND WESTERN, WITH THE MAGIC SONGS OF THE WEST FINNS. By the Hon. John Abercromby. 2 Vols. London: David Nutt, 1898.

In this monograph Mr. Abercromby has made a valuable contribution to the study of anthropology and folk-lore. We have here an interesting summary of the ethnology and folk-beliefs of a race of which English students know little. We generally restrict the name Finn to the natives of Finland and Esthonia, but Mr. Abercromby includes in his survey the allied nationalities of the Mordvins, Ceremis, Votiaks, Permians, and Zirians.

The first volume is in the manner of an introduction to the collection of songs, incantations, and magical formulæ to which the second is devoted. The result of his elaborate survey of the physical characteristics of these races appears to show that while the Finns are brachycephalous, the Ceremis, Esthonians and Livs are mesocephalous. The race, then, as a whole is not homogeneous: rather at some early period two different stocks came in collision and amalgamated. To the question to

which race belonged originally the languages now known as Finnish and Ugrian, in other words—Did the short-headed men impose their tongue on the long-headed men, or *vice versa*?—no distinct answer can be given; but Mr. Abercromby suggests that it is possible to believe that “the original congeries of human beings from which by hypothesis sprang the united Finno-Ugrians or the united Finns alone, was not composed of a homogeneous cranial type.”

We have then the social development of the race traced from the neolithic period down to historical times. It is quite impossible to summarise the great mass of valuable anthropological and folk-lore information which has thus been collected and arranged. We may specially refer to the account of the tribal gods, the system of exogamy, the mutual aversion between the relatives of husband and wife, the influence of naming and the pantheon of the powers of Nature to which their worship is directed. To the student of folk-lore the second volume will be of unusual interest, supplying, as it does, a number of curious spells and incantations much in the style of the old Hindu Atharva Veda. We have spells to induce and remove all manner of disease, to aid the work of the hunter, farmer and housewife, and a large collection of quaint traditional accounts which explain the origin of fire, the metals, and so on. Throughout we find important analogies to the more important cycles of mythology and folk-lore. Mr. Abercromby deserves the gratitude of all students of the subject for his laborious collation and arrangement of a great mass of scattered information on the culture and beliefs of a people whom recent events have made specially interesting to us.

W. CROOKE.

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AMONG THE HIMALAYAS. By Major L. A. Waddell. Westminster: Archibald Constable, 1899.

This book, which may be regarded as a supplement to Major Waddell's valuable account of the Buddhism of Tibet, contains a lively record of a series of excursions made by him in a region of which we have little definite information. It is not a systematic treatise on the geography or ethnology of the great range forming the northern boundary of our Indian Empire, but it is brightly written, and incidentally records many interesting notices of the customs and beliefs held by a very primitive people. Thus, we have a fairly complete account of the Lepchas: among them if the lady take a basket of eggs from her lover it is equivalent to the acceptance of a proposal of marriage: they show obvious traces of the matriarchate, have usually only one wife, and there is no ceremonial marriage. They had no true conception of private property until they learned the idea from contact with Bengal traders. The husband who wishes to divorce his wife pays her a small sum of money, varying according to the length of time they have been married: the wife, if she desire a separation, gives a fixed sum of money and one suit of clothes. He discusses the question of polyandry at some length. It is of the fraternal type, and is partly an arrangement to protect the joint family while the head is away for weeks herding the cattle, and partly a device to keep the common property within the family in a country which cannot support a large population. If the eldest brother marries, his wife is common to him and all the younger brothers: if the second marries, it is only those junior to him who share her favours. But the case of the present queen of Sikkhim is an exception to the rule: she was originally married to the younger half-brother of the present king, now she is joint wife of both. Polyandry, of course, gives rise to a puzzling variety of relationships: usually the children call the eldest of the conjoint brothers “father.”

Among other records of custom we may note that of the blood sacrifice in oath taking, two bull yaks are slain, and the parties to the oath dip their hands in the blood: the Tibetan form of salutation is to press forward the right ear and put out the tongue: when a Nepalese returns from a foreign land he is obliged to drink water with an official as a sort of reinitiation into caste: in one case the skulls of some girls who perished from starvation were made into drums for summoning the devils. The Lama, we are told, has curly hair, which is remarkable in view of the popular representation of the Buddha, which does not agree with any definite Indian type.

Among folk-lore references we have the case of the Mount Tendong, which miraculously elongated itself to save the people from the great flood: hot springs are the abode of devils which cause disease if they are not conciliated: the common marmot if ill-treated brings storms: frogs are worshipped to cause rain: a holy white bull yak appears and brings prosperity to a valley: the Spectre of the Brocken is an omen of good luck, but the beholder must mutter prayers and spells: the lake spirit appears as a furious bull yak or as an alluring siren.

We trust that this book is the forerunner of a larger monograph on the geography and ethnology of a most interesting region.

W. CROOKE.

HINDU MANNERS, CUSTOMS AND CEREMONIES. By the Abbé J. A. Dubois. Translated and edited by H. K. Beauchamp. 2nd Edition. Oxford: Clarendon Press, 1899.

The account of the manners and customs of the Hindus of Southern India by the Abbé Dubois has long been recognised as one of the classical authorities on the religions of India. It was first published under the auspices of the East India Company in 1817, and has been more than once reprinted in later years. Unfortunately the standard edition did not include the last additions and corrections made by the revered author. The original MS. has now been discovered at Madras and has been re-translated and edited with excellent taste and an adequate display of learning by Mr. Beauchamp. The Abbé's work represents, of course, the earlier stage of inquiry into Hinduism, coeval with the writings of Sir W. Jones and the establishment of the Asiatic Society of Bengal. At that time little was known of the original Sanskrit authorities, and the Abbé's inquiries were confined to Southern India, where Hinduism is largely impregnated with Dravidian beliefs, and appears in a very different form from the version of the faith as expounded by the Pandits of Mathura and Benares. But the writer, who lived for many years as a native among the natives, was in a peculiarly favourable position for acquiring a knowledge of their beliefs and practices, and if, as a missionary, he took a more gloomy view of Hinduism than that of later and less prejudiced scholars, this is only what might have been expected. With these obvious limitations the book is valuable and interesting. In many ways it resembles Ward's account of the Hindus of Bengal, and both are useful as descriptions by practical observers of the institutions of Hinduism before it came under the influence of Christianity. Mr. Beauchamp might have done more in referring to the later literature of the subject as contained in the Sacred Books of the East and modern studies of popular Hinduism: but his notes are useful as correcting many of the Abbé's misconceptions. We trust that the Clarendon Press will continue their useful task of rendering the classical accounts of Hinduism more accessible to modern students.

W. CROOKE.

*L'Abrégé des Merveilles traduit de l'Arabe d'après les Manuscrits de la Bibliothèque Nationale de Paris.* Par le Baron Carra de Vaux. (*Actes de la Société Philologique, Organe de l'Œuvre de Saint Jérôme, Tome xxvi.*) Paris, C. Klincksieck, 1898.

The *Book of the Thousand Nights and a Night*, though the most famous of the collections of romances formed under the influence of Arab culture, was by no means the first. Arab literature must have tried its wings, and made many an effort, before it could arrive at flights lofty and sustained as that. The first effect of Mohammedan enthusiasm was undoubtedly, as might have been expected, a repression of all imaginative literature, and indeed of all literature not distinctly religious. In this respect the traditional answer of the Khalif Omar to Amrou's enquiry, what was to be done with the Alexandrian library, though apocryphal, represents accurately enough the fanatical spirit of the conquerors. But the influence of the civilisations they had overcome and partly destroyed could not be evaded. Egypt, especially, must have given a powerful impetus to a disposition greedy of wonders, to which the Koran itself bears abundant witness. And speedily the extravagances we think of as most characteristic of Oriental imagination developed. At first they would take a religious and historical guise; they would be written not for the amusement but for the belief of the faithful. The work of emancipation must have been gradual, and dependent upon a variety of causes; and a considerable period must have elapsed before the tales told nightly for pastime in the tent were solemnly committed to writing.

The book translated by the Baron Carra de Vaux belongs to an early, but not the earliest, period of this evolution. There are several manuscripts of it in the Bibliothèque Nationale at Paris, the oldest of which, a small and rather dirty, but closely and elegantly written work, dated A.H. 882 (which began on the 15th April, 1477, A.D.), forms the basis of the text adopted by the translator. Its defects, and notably two important *lacunæ*, have been supplied from other manuscripts of varying values. The author is unknown. One at least of the manuscripts attributes it to the famous Mas'oudi, who lived in the fourth century of the Hegira; while Makrizi, citing portions of it, ascribes some to an author of the seventh century A.H., and others to Mas'oudi. The translator practically rejects both ascriptions, the former on the ground of date and the latter of style, contenting himself with the conclusion that all the legends are old, and that the book may well represent the state of folklore in the Mussulman world in the tenth century of our era.<sup>1</sup>

Beginning with the Creation, the author, whoever he may have been, gives an account of that interesting event, repeatedly citing the Koran, but not disdaining other equally authentic sources of information, such as tradition, the wise ancients, the speculations of philosophers, etc. He then describes the nations created before Adam (the djinns), and passes on to the description of the world as it is and the various tribes of men. These chapters are full of marvels, not unmixed with fragments of real knowledge, and probably represent fairly the state of Arab geography and ethnography of the period. The history of Adam and his descendants is next traced, winding up with stories of Arab diviners and seers, in connection with the last of whom (a lady), it is interesting to note, the incident of Birnam wood is

<sup>1</sup> There is a note of time on p. 120, where the Lombards are represented as ruling a vast kingdom between the Franks and the Romans (the Greek Empire). If we could depend on it, it would place the composition of the book prior to the reduction of the Lombard kingdom by Charles the Great in 774.

related. The second part is devoted to the marvels of Egypt; in effect, a "history" of that country corresponding in character to Geoffrey of Monmouth's famous chronicle of our own island.

Among the innumerable marvels recited here concerning the works of Egyptian art, many of those well known in mediæval Europe and attributed to Vergil the Magician are prominent. The magical mirror, wherein things distant may be seen, is repeated again and again. The statues which guard the kingdom, or watch over buried treasure, are also frequently met with. If the translator be right in fixing the date of the collection in the tenth century, written evidence of these beliefs in magical works of art is found in the East two hundred years before it appears in European literature. The question is thus raised whether some at least of the traditions fastened on the great name of Vergil may not have been imported from the Arabs. This is a possibility which neither Signor Comparetti nor Professor Tunison has fully reckoned with. While, however, the question is worth consideration, it must never be forgotten that priority of writing does not of necessity mean priority of telling.

To notice other marvels which appear in the course of this curious "history" of Egypt, as it was received by the Arabs of the early centuries of Mohammedanism, would exceed my space. It must suffice to have drawn the attention of the members of the Institute to a book of such importance to all who are interested in Oriental fictions, and in the problems of the growth and transmission of human ideas. Nor is it merely of value for these matters. It presents a picture of Arab science at the period when it was written, and thus forms a document necessary for the study of Arab civilisation, and instructive to compare with the contemporary writings of the West.

E. SIDNEY HARTLAND.

VOCABULARIES FROM KAVIRONDO, BRITISH EAST AFRICA. Collected by  
Mr. C. W. HOBLEY, F.R.G.S.

(Communicated by Mr. E. G. Ravenstein, F.R.G.S.)

[WITH PLATE XXIX.]

Kavirondo, from an ethnographical point of view, is one of the most interesting districts of British East Africa, for within it meet the boundaries of three great linguistic divisions of that continent, the centre of the country being occupied by Bantu, the lake-shore by near kinsmen of the Shuli and Shiluk of the upper Nile, and the wide steppes in the north and east by pastoral tribes whose languages suggest a Hamitic origin. Since Mr. Joseph Thomson's visit in 1883, Kavirondo has been frequented by numerous European travellers, and among these Mr. Hobley has had the best opportunity for acquiring a full knowledge of the country and of its inhabitants. During a residence of three years, as administrator of the district, he traversed the country in all directions, vastly improved existing maps,<sup>1</sup> and collected valuable information on the languages spoken.

The six vocabularies compiled by him number about a hundred words each. He took great care to eliminate errors due to the ignorance or carelessness of the interpreters. In the case of the Lako, Nandi, and Muhasa languages, the words had first to be translated into Masai and then into Swahili, before the English meaning was reached, and only in those cases where an article could be pointed

<sup>1</sup> See his papers with maps, in the *Geographical Journal*, ix, 1897, and xii, 1898.





at the word was obtained direct. Mr. Hobley has not collected sentences or grammatical notes, but as he is again at his post he will no doubt endeavour to secure fuller information than he obtained during his first period of residence.

On the accompanying sketch-map (Plate XXIX) the names of all the tribes mentioned and grouped linguistically by Mr. Hobley, and no others, have been inserted.

This map shows that the Kavirondo occupy the centre of the district, as well as two detached territories to the north, one of which is held by the Kamuni, who are closely related to the Ketosh, whilst the more distant one is in the possession of the Muhasa and of several minor tribes closely related to them. The vocabulary of the Kavirondo language was obtained at Mumia's boma. The language of Muhasa seems to differ from it only dialectically. There can be no doubt at all that both these languages belong to the Bantu family.

We can speak quite as confidently as regards the relationship between the languages spoken by the shore-tribes, as represented by Nife, and the languages spoken on the upper Nile. Mr. Hobley had an opportunity of obtaining a Shuli vocabulary from a Sudanese soldier, and found that Nife was very much like Shuli. This conclusion is fully borne out by a comparison with the vocabularies of Shuli, Lur, Shiluk, Jur, etc., published by Dr. Emin in the *Zeitschrift für Ethnologie* (1882). The "Kavirondo" of the Rev. M. Wakefield<sup>1</sup> belongs to the same Nilotic family for the coast-tribes apply the term Kavirondo to the country, without reference to the languages spoken by the tribes who inhabit it. This use of the word seems to explain, too, Dr. Fischer's statement that the Wanga at Mumia's town, the Nyoro and the Wifu (Hobley's Marama) do *not* speak Kavirondo, but some other language.<sup>2</sup>

The *Elgumi* occupy a vast territory extending from the shore of Lake Rudolf as far as the territory to the east of the upper Nile occupied by the Latuka and the Lango.<sup>3</sup> The *Elgumi* country is known as Turkana. The vocabulary now published was obtained in a district to the south-west of Mount-Elgon, called Imanikoko or Ekariwok.

The *Kikelelwa*, who occupy a detached district in the centre of Kavirondo are also *Elgumi*, who migrated from Ugema some fifty years ago. Mr. Hobley is inclined to enrol the *Elgumi* in the Nilotic family, although apart from a few numerals and one or two other words, which are the same as in Masai and Shuli, there seems to be no ground for such an assumption.

The *Nandi* (or Jangwel) and their kinsmen the *Lako*, on the other hand, are stated to resemble the Hamitic Somal, and to have the pastoral instincts which appear to be characteristic of many of the Hamitic tribes. Höhnel,<sup>4</sup> however, places Masai, *Elgumi*, *Nandi*, and *Suk* in the same group, and Professor Leo Reinisch, from a small vocabulary of the *Suk* language, judges all these tribes, and at all

<sup>1</sup> *Vocabulary of the Kavirondo Language*, London (S.P.C.K.), 1887.

<sup>2</sup> See Petermann's *Mitteilungen*, 1895, pp. 46, 66. Dr. Fischer says that the Nyoro are called Wakami by the Kavirondo and Tiriko by the coast traders. Mr. Hobley has three distinct tribes or districts:—Nyoro, Kami and Tirikè; he calls Fischer's Wanga, Kisesa. It is much to be regretted that a full account of Dr. Fischer's visit to Kavirondo in 1886 has never been published.

<sup>3</sup> Dr. Emin published a vocabulary of Latuka which shows them to be Masai or Wakuavi as pointed out by me in 1884 in the *Proc. Roy. Geog. Soc.* The Lango appear to be their kinsmen, although some of them appear to be bilingual, speaking also Shuli.

<sup>4</sup> Petermann's *Mitteilungen*, *Ergänzungsheft* No. 99, pp. 33–35.

events the Suk, to belong to the Nilotic family. Vocabularies, however, are hardly sufficient to settle this point. It is nevertheless deserving notice that the word for ten—*tomon*—is the same in the languages spoken by the Beja, the Shoho, the Arbore Galla, the Dawro and other tribes in southern Abyssinia, the Masai, the Elgumi and the Nandi.

E. G. R.

English.	Kavirondo, Kisisa Dialect.	Mubasa.	Nife.	Elgume.	Nandi.	Lako.
Sun ....	eriuba	....	wankchien	akelon	asista	asista.
Moon ....	umwezi	....	tue	elap	arawet	arawet.
Fire ....	malilo	muriro	machi	akim	māt	mala.
Rain ....	nifula	....	kaoti	akiru	robta	ropda.
Water ....	amazi	medzi	pi	agipi	bek	pigor.
Man ....	mundu	gutimutu	tzano	etunga	ayondit	chito.
Women ....	mkossi	mkasi	tzako	aberu	korusick	koroket.
Father ....	baba	....	woru	papakan	baba	baba.
Mother ....	mama	....	mama	totokan	yeyonyo	mama.
Child ....	....	....	....	ekoko	—	—
Male child	....	....	....	ekilokiti	—	—
Female child	....	....	....	apesi	—	—
Head ....	omurui	mutwi	wie	aku	metit	metit.
Nose ....	molu	muru	....	....	....	seroot.
Eye ....	imoni	t z i m o n i (plur.)	wanga	akongo	konde	—
Ear ....	okurui (plur. marui)	ikutu	itza	akiti	idit	idit.
Tongue ....	ololulimi	lulimu	lep	angajeb	guelebda	mesit.
Teeth ....	ameno	gameno zaria	lak	ekela	kelek	kendit.
Hair ....	diswi	liswui	wichi	etim	sumek	sabwiek.
Leg ....	inguo	vigendero	tienda	akejen	nguriet	kenda.
Arm ....	mukono	mukono	kingi	akan	ewoot	ewoot.
Finger ....	oluala	jiriyara	lueto	ibokori	morit	morit.
Finger nails	ditera	viteta	kugono	abelikek	siet	pundet.
House ....	inzu	inyumba	oti	etogo	koet	kuto.
Salutation	murembi mu- no	yoko yoko mana, or gwenā	amosia	mata	m u r e n n i sovai	sovai misiri.
Spear ....	lifumo	lifumo	tong	akwara	wotet	uwotet.
Bow ....	uhingo	uhingo	atunu	akawa	kweanda	kweanda.
Arrows ....	miwano	miwano	atsero	ekoyo	kortick	kortiet.
Shield ....	ngao	ngabo	....	ebuku	....	longet.
Club (knobstick)	....	....	....	ebiro	—	—
Gun ....	....	....	....	ekipiai	—	—
Hoe ....	mbagu	....	kweri	emeleku	magombet	magonget.
Knife ....	....	....	pala	ekileng	—	—
Cooking pot	inyungu	chinaga	akulu	amuti	teret	teret.
Stool ....	....	....	....	ekicholon	—	—
Tobacco-pipe	....	....	....	amutike taba	—	—
Cloth ....	inanga	(no word)	lao	emukuli	ongoriet	anget.
Beads ....	ishuwa	(no word)	utiti	atipe	sonoei	sonandet.
Cowries ....	zisimbi (sing. isimbi)	zisimbi	gaki	esegira	segeri	segeri.
Iron ....	eshivia	chivia	utiti (sic)	aswat	soniek	burutik.
Iron wire	olinalu	....	amina	(no special word)	magariat	segengeit.
Brass wire	mkasa	....	mula	aisinet	taiet	tiet.
Earth ....	diroba	idoi	lo	alu	nguyek	mwenyut.
Stone ....	nigiwi	liwari	kiti	amuru	geita	ruandit.

English.	Kavirondo, Kisisa Dialect.	Muhasa.	Nife.	Elgume.	Nandi.	Lako.
River	mwalu		nam	angwalol	ainet	inet.
Lake	liala		iyea	atabara	silgoi	kurimbet, tam- babolyet.
Hill	ishikulu		atsutso	emuru	legurnet	tulwet.
Cattle	ningombe	inasu, nti	tsiangi	akiteng	teta...	toga.
Buffalo	imbogo		jo	kasowan	sayet	sayet.
Sheep	likonde	mahesi	rombo Lur	umerikek	echiriet	kechir.
Goat	imbuzi, es- haill	imbwi, chin- gavu	dieli	ekine	gnoriet	warek.
Dog				ekingok	—	—
Bird				egwenyi	—	—
Fowl	ingok	nguku	kweni	akokor	ngoket	ngoket.
Eggs	mabuyu	rigi	tongweni	abeil	kaiwaiek	megeik.
Milk	maweri		chak	akile	chego	chego.
Meat	ninyama		ringho	akeri	pendo	pindjo.
Hide	lisero	riafu	pien	ejamu	mwita	mwitu.
Elephant	ninsolu		liechi	etome Latuk	eliot	maiet.
Ivory	ulwika (plur. zinzika)	ipoko	lak	ekela	kelek	kendet.
Rhinoceros			njiri	anusing	kebawet	kibawet.
Lion	linani		ogwangi	angaturyi	myetunda	ningatingjo.
Giraffe			amuga	ekuri	kenchuyet	kaiyandet.
Tree	msala	gutigusara	yen	akitoi	ketit	taranyet.
Grass	obonyassi	unyassi	lumu	anya	suswek	susek.
Millet (mtama)	maveri		bel	mumwa	musongeik	jego.
Maize (mohindi)	matumwa		otuma	ekurididi	(not known)	setet.
Banana	maremwa	itidoti	labolo	alaboro	watotiat	ndotet.
Native beer	malua		kongo	ajwen	maiek	piniondet.
Tobacco	ndaba	itaba	ndawa	taba	tumotet	tumotet.
Firewood	elogui	tchiku	yieni	aketo	kwenek	kwenela.
To-day	lero		tenendi	aparan	rakhui	rankut.
To-morrow	msuri		kinyi	emui	mutai, tuni	mutai.
Good	ndai		wachango	akajukan	karara	karanan.
Bad	imbi		rachi	erono	lya	miat.
Big	nkali		etuon	loka polon	nua	korigit.
Small	mtutu		matin	matit	niminim	kisicho.
Black	imari		rateng	lokironon	tui	tosh.
Red	malasiri		suluwali	lokaringan	libiri	ara.
White	ndafu		rachari	lokakwangan	leil	siriwesh.
Buy	kula-kula		nio	agwela	alisiet	gagwan.
Sell	kula		azinieo	kiseja	kioni	guzit.
Sit	ikhala		petipin	akibui	tibingwan	tubangwen.
Stand	singira		etchun	akiwo	ketonon	janyo.
Go	tsia	gutzi	tzi	alosito	ngebe	ngebe.
Carry	chinga		tingi	akiwoke	kakaikasem	kisana.
Give	mbe	tupeni	mia	aso	koitoi	koni.
Say	semaza ?					sunget.
Build	iyumbakha		kerooti	agiduk	ketegort	kakitei.
Want	makoka	mbebe	atwaro	akikoto	kelekono	amachakio.
Cultivate	ku-rima		etziburu	akuru	kibat	webaba.
Fight	khupe		jogore	arem	kibarike	kibaragei.
Hunt	ku-ima		duara	amej	kibendi	jangewenda.
Cut	akhlaka		gnolo	agitub	kidilit ilogot	kenawewa.
Kill	ira		etchuo	akiara	kakiba	pusio.
Sleep	kona		nendo	aperu	eruyo	moru.
Die	fua		etso	atwanare	komet, kam- ikito	kame.
1	ndala	chonyeri	achiel	apuru	agenzi	agenzi.
2	ziwili	viwiri	ario	are	aien	aien.

English.	Kavirondo, Kisisa Dialect.	Muhasa.	Nife.	Elgume.	Nandi.	Lako.
3	zi-taru	bitatu	adek	auni	somo	soruok.
4	zi-nne	vinne	anghwen	aungwen	angwan	angwan.
5	tzaranu	bitano	abichi	akanyi	moot	moot.
6	tzi-saraba	bisesaba	ouchiel	akanya kape	ilo	ilo.
7	msaf....	vinne vitatu	na abichi kario	akanya kare	tisab	tisab.
8	munane	chinane	abichi kadek	a k a n y a kauné	sisit	sisit.
9	tzaranu-nne	vinne na vitano	abichikangh- wen	akanya kang- wun	sokhol	sokol.
10	ekumi	vikumi	apare	atomon	taman	taman.

*Explanation of Plate XXIX.*

Sketch-map showing position of all the tribes mentioned by Mr. Hobley in the preceding paper on vocabularies from Kavirondo.

## A WEEKLY MIRACLE.

Under the above heading an article appears in the *Cornhill Magazine* for March, 1899, giving an account of one of the ordinary weekly services of one of the more extravagant sects of Mahommedanism, the Isawiyah. The writer, Mr. Roger E. Fry, remarks that:—

"The sect of the Isawiyah is hereditary . . . The sect originated in the early days of Mahommedanism among certain holy men who acquired immunity from the stings of poisonous reptiles; but it takes its name from a later saint, Sidi ben Isa, who gave the sect its present constitution and its sacred writings, and immensely extended the powers of immunity possessed by its members, discovering how to swallow broken glass, nails, prickly pears, leaves and other apparently deadly things." He adds that the sect is found throughout Tunis and Algiers, and that "they are neither more nor less pious, and they pursue the same callings as their less gifted neighbours; but on any great occasion, such as the Bey's birthday, when a particularly auspicious influence is desired, the Isawiyah assemble and go through their terrible self-immolations."

Mr. Fry was present at an ordinary weekly service at a place about forty miles from Tunis. The music and dancing of which it consisted became gradually faster and more violent, till, the dancers being in a state of frenzy, one of their number came forward and approached a man who acted as a kind of steward, and held in one hand a large cloth filled with pieces of broken glass. Even then he drew back at first.

"At last, when the eager gesture of his outstretched neck made it clear that no vestige of reluctance remained, the steward clapped the glass into his mouth and held his hand over it for a second. The devotees rushed back, as it were, for consolation to the first steward and held him in a tight embrace. For some time he remained so, making strange incoherent gestures with his arms, while the steward, gradually lifting up his head, proceeded to massage his face and throat; when his head was raised the man was still chewing and swallowing the horrible mouthful. After he had recovered himself somewhat his turban was wound round his head and he was lifted and shoved back into the line of dancers."

Then glass eating became general. We are told that some of the Isawiyah never attain to the power of eating glass, while others have it almost from birth. After the glass had been devoured, the next course consisted of carpenter's nails "at least three inches long," which was succeeded by another of prickly pears. Granting that the glass was actually swallowed, it would be difficult to over-estimate the number of bites which each morsel would require before it could be safely consigned even to the *dura ilia messorum*.

T. V. H.

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ENGLISHMEN AND ROMANS.

Professor Sergi has just published in the *Nuova Antologia*, a very interesting paper, entitled "Inglese e Romani." Therein he justifies his adhesion to the opinion that of all modern nations the English most nearly reproduce the moral type of the conquering, colonizing, organizing Roman. And he proceeds partially to account for this similitude, by pointing out that the Romans were in the main southern or Mediterranean dolichocephali, and that the British are in the main northern dolichocephali; and that these are after all at bottom one race, though divided ages ago by the intrusion of the eastern or Alpine brachycephali, whom he considers to be the true Aryans.

J. B.

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FISHING WITH KITES.

In one of his recent despatches from New Guinea Sir William MacGregor gives an interesting account of the very original method the natives of Dobu employ for catching fish by means of flying a kite. The kite is gracefully and cunningly constructed of four leaves, each about a foot long and 3 to 4 inches broad. To the kite are attached two strings, one of which is usually about a quarter of a mile long, though for fishing from the beach it may be much shorter. The fisherman holds the end of this string, and by it he regulates the position of the kite. The other string attached to the kite is long enough to reach the water, and may be from 100 to 300 yards in length. To the lower end is attached, instead of a hook, a small tassel about half an inch thick and some 3 or 4 inches long, made of spiders' web. The fisherman seats himself in a small canoe, proceeds to sea, and flies his kite, so as to keep the tassel of the spiders' web bobbing on the water. The fish that catches this entangles its teeth in the loose, soft, elastic bunch of spiders' web, from which it cannot disentangle itself until it is quietly lifted into the canoe by a small triangular net mounted on a forked stick. The spiders' web is procured from a certain kind of spider found at Dobu. The "insect," or a number of them, is tossed on a long cleft reed or bamboo until a close double tissue of web about 3 to 4 inches broad and 4 to 6 feet long is obtained. A similar tissue of spiders' web was made in the Solomon Islands many years ago for strangling widows, and without any connection with fishing. Complete sets of this ingenious and singular apparatus have been forwarded to the official collection in Brisbane, including the stored web, together with the spider itself for determination.—*Morning Post*, Dec. 28, 1898.

## INDEX.

## A.

- Abercromby, Hon. J., on Pre- and Proto-Historic Finns (*rev.*), 334.  
 Africa, South, Stone Implements from, 251, 258.  
 Africa, West, Conceptions of Property in, 194.  
 Africa, West, Miss Kingsley's Studies (*rev.*), 333.  
 Afridi, Col. Sir T. Holdich on, 192.  
 Amery, P. F. S., on Remains on Dartmoor, 188.  
 Amsterdam, New Anthropological Society at, 323.  
 Angoni Skulls, F. Shrubsall on, 77.  
 Anniversary Address, 312.  
 Arab Marvels (*rev.*), 337.  
 Arunta Tribe, Australia, 276, 278, 280.  
 Ashanti Skulls, F. Shrubsall on, 95.  
 Australia, Folklore of, 22.  
 Australia, Survival of Palæolithic Conditions in, 199.  
 Australia, Central, Native Tribes of (*rev.*), 330.  
 Australia, North, Dilly Baskets from, 21.  
 Australia, Western, Bark-Bundle of Native Objects from, 20.  
 Australian Tribes, Totemism of, 275, 281.  
 Aynsley, Mrs. M., on Folklore in Guernsey, 186.

## B.

- Balfour, H., 34, 132, 307.  
 Ballot, J., on South African Stone Implements, 273.  
 Bantu Skulls, F. Shrubsall on, 55.  
 Bantus, Southern, 55; Western, 72; Eastern, 76; Northern, 86.  
 Bark-Bundle from Western Australia, 20.  
 Baskets from North Australia, 21.  
 Basutos, 70.  
 Bechuanas, 70.  
 Beddoe, Dr. J., on Ethnology of Cornwall, 328.  
 Beddoe, Dr. J., on the Mediæval Population of Bristol, 184.  
 Bevan, Rev. J. O., Exhibition of Stone Implements, etc., from North America, 154.  
 Bird Story, Australian, 25.  
 Bishop, Mrs. Isabella, on the Mantzu of Western Sze-Chuan, 191.  
 Boat-Building of Siam, 192.  
 Bolton, H., on Remains at Uphill, near Bristol, 188.  
 Brabrook, E. W., at Bristol Meeting of the British Association, 184, 323.  
 Brabrook, E. W., 307.  
 Breconshire, Objects from a Cairn in, 3.  
 Bristol, British Association at, 184, 323.  
 Bristol, Mediæval Population of, 184.  
 Bristol, Prehistoric Antiquities of, 187.  
 British Association, Anthropology at, 184, 323.  
 British Columbia, Rock-Drawings from, 197.  
 British Columbia, Totem House-Posts from, 186.  
 British Museum, Anthropology at the, 315.  
 Brown, Nicol, on Stone Implements from South Africa, 52, 268, 272.  
 Browne, Dr. C. R., Ethnography of Clare Island, 322.  
 Buckland, Miss A. W., Obituary, 325.  
 Bulleid, A., on Lake-village of Glastonbury, 188.  
 Burrows, Captain Guy, on Natives of the Upper Welle District, 35.

## C.

- Cairn in Breconshire, opened by Mr. Cantrill, 3.  
 Campbell, W. Y., on South African Relics, 273.  
 Canada, Report on the North-West Tribes of, 195.  
 Canada, Ethnographical Survey of, 196.  
 Canoe building, invention of, in Yap, 301.  
 Canoes of the Jekris, 120.  
 Cantrill, T. C., on Objects from a Cairn in Breconshire, 3.  
 Carnegie, Hon. D. W., on a Bark-Bundle of Native Objects from Western Australia, 20.  
 Carnegie, Hon. D. W., Spinifex and Sand (*rev.*), 333.  
 Carra de Vaux, Baron, 337. (*See Vaux.*)  
 Caves of South Africa, 258.  
 Central Australian Totemism, 275, 281.  
 Central Indian Hill Tribes, 220.  
 Children, Mental and Physical Deviations from the Normal among, 185.  
 Christian, F. W., on Micronesian Weapons, Dress, Implements, etc., 288.  
 Circles of Stanton Drew, 187.  
 Clare Island, Ethnography of, 322.  
 Clodd, E., on Tom Tit Tot (*rev.*), 179.  
 Codrington, R., elected, 34.  
 Congo, Natives of Upper Welle District, 35.  
 Cornwall, Ethnology of, 328, 329.  
 Costa, Lake-Dwellings on Banks of the, 150.  
 Council, Report of, 310.  
 Cranborne Chase, Excavations in, by Lieut.-Gen. Pitt-Rivers (*rev.*), 173.  
 Crooke, W., on the Hill Tribes of the Central Indian Hills, 220.  
 Crooke, W., Review of Dubois' Hindu Manners, 336.  
 Crooke, W., Review of Abercromby's Pre- and Proto-historic Finns, 334.  
 Crooke, W., Review of Major Waddell's Among the Himalayas, 335.  
 Crooke, W., elected Secretary, 307.  
 Cymri, Marriage Laws and Customs of the, 155.

NEW SERIES, VOL. I, NOS. 3 AND 4.

## D.

- Dartmoor, Megalithic Remains of, 188.  
 Dawkins, Prof. Boyd, 189, 321.  
 Deniker, M., Classification of the Races of Europe, 166.  
 Dilly Baskets from North Australia, 21.  
 Dravidians, 223, 224, 230, 248.  
 Dubois, the Abbé, J. A., on Hindu Manners (*rev.*), 336.  
 Duncombe, Hon. Cecil, on Lake-Dwellings on the Costa, near Pickering, Yorkshire, 150.  
 Dunlop, W., on Australian Folk-lore, 22.

## E.

- Ear as a Means of Identification, 185.  
 Edge-Partington, J., Exhibition of Carved Maori Heads in Kauri Gum, 2.  
 Edge-Partington, J., Third Part of his Ethnographical Album of the Pacific Islands, 200.  
 Egypt under the First Three Dynasties, Prof. Flinders Petrie on, 193.  
 Egyptians, Prof. F. Petrie on our Present Knowledge of the Ancient, 202.  
 Ellis, Miss M. A., on the Ear as a Means of Identification, 185.  
 Elworthy, F. T., on Some Roman Symbolic Hands, 186.  
 Englishmen and Romans, 343.  
 Eoliths, 53, 268, 272, 273, 318.  
 Etheridge, R., Exhibition of Photographs of Dilly Baskets from North Australia, 21.  
 Ethnographical Survey Committee's Sixth Report, 189.  
 European Races, Deniker's Classification of, 166.  
 Evans, Sir John, on the Glastonbury Lake-Village, 189; on the Square Plan of Italian Towns, 191; on Egyptian Flint Knives, 194; on N.W. Tribes of Canada, 196.  
 Evans, Sir John, on London before the Saxons, 323.

2 A

- Evans, A. J., on the Origin of Stone Worship, 186; on the Glastonbury Lake-Village, 188; on the Plans of Italian cities, 191; on Prof. Petrie's Discoveries in Egypt, 194.  
Evans, A. J., elected Vice-President, 307.

## F.

- Felkin, Dr. R. W., on Captain Burrows' Paper, 47.  
Finns, Pre- and Proto-Historic (*rev.*), 334.  
Fire, Discovery of, by Murray Islanders, 18; by Australians, 25; in Yap, 301.  
Fishing with Kites, 343.  
Flower, Sir W., Anthropological Gallery at British Museum, 315.  
Flower, Sir W., Essays on Museums etc. (*rev.*), 175, 315.  
Folklore of Murray Islands, 13; of Australian, 22; of Guernsey, 186; of the Hebrides, 186; on Insects and Spiders, 186; of the Caroline Islands, 300.  
Folklore, Savage Philosophy in, 179.  
Folklore Society, 323.  
Folk-Song of Scandinavia, 180.  
Fox Warren, near Weybridge, Totem-Post at, 133.  
Frames, M. E., on Stone Implements from Griqualand-East, 251.  
Frazer, J. G., Observations on Central Australian Totemism, 281.  
Frazer, J. G., on Totemism, 142, 145, 275, 278.  
Funafuti, Ethnology of (*rev.*), 177.

## G.

- Garson, Dr. J. G., on Sir W. Flower's Essays (*rev.*), 175.  
Garson, Dr. J. G., on Schenk's Determination of Sex (*rev.*), 182.  
Garson, Dr. J. G., his aid in Library, and with Lantern, 327.  
Garson, Dr. J. G., 34, 48, 90, 103, 132, 149, 201, 219, 287.  
Geographical Names, Confusion in, 330.  
Gillen, F. J., on Totemism as Applied to Australian Tribes, 275.

- Gillen, F. J., and Prof. Spencer, Native Tribes of Central Australia (*rev.*), 330.  
Glacial Man, 317.  
Glastonbury, Lake-Village of, 188.  
Godden, Miss G. M., Enquiry as to Futile Rope-Making and Water-Carrying, 200.  
Gomme, G. L., 103, 204, 219.  
Gowland, W., 219, 287.  
Granville, Reginald K., Felix N. Roth, and H. Ling Roth, on the Jekris, Sobos, and Ijos of the Warri District of the Niger Coast Protectorate, 104.  
Gray, Rev. W., on the Natives of Tanna, 127.  
Grey, Sir George, Obituary, 323.  
Griqualand - East, Stone Implements from, 251.  
Guernsey, Folklore in, 186.  
Guinea, New, Tribes Inhabiting Mouth of the Wanigela River, 205; Physique, 205; Childbirth, 206; Initiation, 207; Courtship, 207; Death, 210; Inheritance, 212; Warfare, 212; Purification, 213; Feasts, 214; Religion, 216; Sorcery, 216; Hunting and Fishing, 217.  
Guise, R. E., on the Tribes inhabiting the mouth of the Wanigela River, 205.

## H.

- Haddon, Prof. A. C., Exhibition of Natives of Torres Straits, slides of, 2.  
Haddon, Prof. A. C., Expedition to Torres Straits, 193, 321.  
Hæmatite Axe-heads from Central Africa, 46.  
Haida Totem-Post, 133.  
Hands, Roman, Symbolic, 186.  
Hardy, N., Exhibition of Slides of New Guinea, 204.  
Hartland, E. Sidney, on Scandinavian Folksong (*rev.*), 180.  
Hartland, E. Sidney, on Arab Marvels (*rev.*), 337.  
Hebrides, Folklore in, 186.  
Hedley, Charles, on Ethnology of Funafuti (*rev.*), 177.  
Hicks, Dr., on Glacial Man, 317.

- Hill-Tout, C., on Rock-drawings from British Columbia, 197.  
 Hill Tribes of Central Indian Hills, W. Crooke on, 220.  
 Himalayas, Among the, by Major Waddell (*rev.*), 335.  
 Hindu Manners, etc., by the Abbé Dubois (*rev.*), 336.  
 Hopley, C. W., on Kavirondo Vocabularies, 338.  
 Holdich, Col. Sir T. H., elected, 287.  
 Holdich, Col. Sir T. H., on the Swati and Afridi, 192.  
 Holmes, T. V., on Australian Folklore Stories, 22.  
 Holmes, T. V., Smithsonian Institution (*rev.*), 178.  
 Holmes, T. V., on Tom Tit Tot (*rev.*), 179.  
 Holmes, T. V., Carnegie's Spinifex and Sand (*rev.*), 332.  
 Holmes, T. V., on a Weekly Miracle, 342.  
 Holmes, T. V., 19, 103, 204.  
 Holt, R. B., on Marriage Laws and Customs of the Cymri, 155.  
 Howarth, O. H., on Human Life at High Altitudes, 185.  
 Howorth, Sir H. H., on a New Scheme of Geological Nomenclature, 320.  
 Hughes, Prof. T. McK., on Stone Implements, 318.  
 Hunt, Rev. A. E., Ethnographical Notes on the Murray Islands, 5.  
 Hutchinson, Rev. H. N., elected, 2.  
 Hutchinson, Rev. H. N., on Anthropological Photographs, 250.  
 Hutchinson, Rev. H. N., Auditor, 287.

## I.

- Ijos, West Africa, 104.  
 Indian Hills, Tribes of Central, 220.  
 Insect Life, Myths of, 186.

## J.

- Japan, Tabu in, 187.  
 Jekris, West Africa, 104.  
 Jennings, John, elected, 149.  
 Jennings, John, on an Ethnological

- Collection from Santa Cruz and the New Hebrides, 164.  
 Jevons, Dr. F. B., elected, 149.  
 Jevons, Dr. F. B., History of Religion, 144.  
 Jones, Prof. T. Rupert, Exhibition of Stone Implements from Swaziland, 48.  
 Jones, Prof. T. Rupert, on Stone Implements from Griqualand-East, 253.  
 Jones, Prof. T. Rupert, on South African Stone Implements, 274.  
 Jujus of the Jekris, Sobos and Ijos, 110.

## K.

- Kaffir Skulls, 57.  
 Kauri Gum, Maori Heads carved in, 2.  
 Kavirondo, Vocabularies from, 338.  
 Keane, Prof. A. H., New Work by, 200.  
 Kentish Migrations, 190.  
 Kingsley, Miss Mary, elected, 149.  
 Kingsley, Miss Mary, on West African Conceptions of Property, 194.  
 Kingsley, Miss Mary, West African Studies (*rev.*), 333.  
 Kites, fishing with, 343.  
 Krauss, A., on the Tarahumari Indians, 197.

## L.

- Lake-Dwellings on the Banks of the Costa, Yorkshire, 150.  
 Lake-Village of Glastonbury, 188.  
 Lang, Andrew, 132.  
 Legends of Murray Islanders, 13, 15, 17.  
 Lewis, A. L., on Stone Implements from Africa, 48.  
 Lewis, A. L., on Circles of Stanton Drew, 187.  
 Lewis, A. L., 2, 34, 48, 201, 307.  
 Lewis, A. L., Report as Treasurer, 308.  
 Leith, G., on Caves, Shell-mounds and Stone Implements from South Africa, 258; Caves in the Stormberg, 258; Caves at Mossel Bay, 260; Caves at East London, 264; Shell-mounds, 265; Stone Implements near St. Blaize, 266; Stone Implements in the Transvaal, 267; Special Implements, 271.

Lowrie, Rev. J. H., Photograph of Tannese, 132.

## M.

Mantzu, Mrs. Bishop on the, 191.  
 Maori Heads Carved in Kauri Gum, 2.  
 Marriage Laws and Customs of the Cymri, 155.  
 Marriot, H. P. FitzGerald, on Capt. Burrow's paper, 47.  
 Marvels, Arab (*rev.*), 337.  
 Metalanim Fairy Tales, 304.  
 Meteorites, Prof. Miers, on, 186.  
 Michelson, James, on Lake-Dwellings in Yorkshire, 150.  
 Micronesian Weapons, Dress, Implements, etc., F. W. Christian on, 288; Ponape, 288; Dress and Adornments, 289; Tools and Implements, 290; Fishing, 291; Cooking, 293; Loom, 294; Axes and Knives, 295; Weapons, 297; Musical Instruments and Dances, 298; Dances, 299; Yap Folklore, 300.  
 Miers, Prof. A. H., on Stone-worship, 186.  
 Minakata, K., on Tabu in Japan, 187.  
 Mines, Ancient, of Rhodesia, 273.  
 Miracle, a Weekly, 342.  
 Morgan, Prof. C. Lloyd, on Pre-historic Antiquities of Bristol, 187.  
 Mortillet, Prof. G. de, Obituary, 326.  
 Munro, Dr., on Archaeology and Chronology, 318.  
 Murray Islanders, 5; Tribes and Totems, 6; Government and Laws, 6; Property, Religious Ideas, 7; Sorcery, 8; Divination and Taboo, 8; Marriage, 9; Menstruation, 11; Childbirth, 11; Child-naming, 12; Death and Burial, 12; War, 12; Food, 12; Arithmetic, 13; Legends, 13, 15, 17; Discovery of Fire, 18.  
 Museums, Essays on, by Sir W. Flower (*rev.*), 175.  
 Musquakie Indians, 187.  
 Myres, J. L., on Anthropology at the British Association, 184.  
 Myres, J. L., Review of Miss Kingsley's West African Studies, 333.

Myres, J. L., Classification of Photographs, 311.

## N.

Nazar, M. H., elected, 19.  
 New Guinea, R. E. Guise, on Tribes of, 205.  
 New Hebrides, Ethnological Collection from, 164.  
 Newton, E. T., on Pleistocene Man, 317.  
 Niger Coast Protectorate, Tribes of the Warri District of the, 104.  
 North Australian Dilly-Baskets, 21.

## O.

Oracles of the Azande Tribe, Central Africa, 47.  
 Orange Free State, Stone Implements from, 54.  
 Owen, Miss M. A., on the Myths and Customs of the Musquakie Indians, 187.

## P.

Parkin, W., elected, 19.  
 Peek, Sir Henry, Obituary, 324.  
 Penning, W. H., Exhibition of South African Stone Implements, 54.  
 Petrie, Prof. W. M. Flinders, on Traces of Primitive *terramare* Settlements in the Modern Towns of North Italy, 190.  
 Petrie, Prof. W. M. Flinders, Egypt under the three first Dynasties, 193.  
 Petrie, Prof. W. M. Flinders, on our Present Knowledge of the Ancient Egyptians, 202.  
 Photographs, Anthropological, Rev. H. Hutchinson on, 250.  
 Photographs, Anthropological, Mr. Myres' Classification of, 311.  
 Pickering, Yorkshire, Lake-Dwellings near, 150.  
 Pineau, Léon, Les Vieux Chants populaires Scandinaves (*rev.*), 180.  
 Pitt-Rivers, Lieut.-Gen., Excavations in Cranborne Chase (*rev.*), 173.

Pitt-Rivers, Lieut. - Gen., Scientific Archaeological Work of, 316.  
 Pitt-Rivers Museum at Oxford, Totem House-Posts in, 136.  
 Plateau Implements, 53, 268, 273, 274.  
 Ponape, 288.  
 Pottery of the Jekris, Sobos, and Ijos, 119.  
 President's Address, 312.  
 Pusey, E. B., Scrutineer, 307.  
 Pygmies of Central Africa, 36.

## R.

Ravenstein, E. G., on Kavirondo, 338.  
 Read, C. H., on Objects from the Costa, near Pickering in Yorkshire, 153.  
 Read, C. H., on Ethnology of Funafuti (*rev.*), 177.  
 Read, C. H., elected President, 307.  
 Read, C. H., 2, 19, 34, 149, 185, 287.  
 Report of Treasurer, 308; of Council, 310.  
 Rhodesia, Ancient Relics in, 273.  
 Ridgway, Prof., 274.  
 Ripley, W. Z., on Deniker's Classification of the Races of Europe, 166.  
 Risley, H. H., on Ethnology of Bengal, 221.  
 Rivers, Gen. Pitt-, Work in Cranborne Chase, 173, 316.  
 Robertson, Sir G. Scott, elected, 287.  
 Romans and Englishmen, 343.  
 Roth, Felix N., on the Jekris, Sobos, and Ijos of the Warri District, 104.  
 Roth, H. Ling, on the Jekris, Sobos, and Ijos, 104.  
 Rudler, F. W., Presidential Address, 312.  
 Rudler, F. W., Gen. Pitt-Rivers' Excavations in Cranborne Chase (*rev.*), 173.  
 Rudler, F. W., 2, 19, 34, 48, 103, 132, 149, 201, 204, 219, 220, 249.

## S.

Santa Cruz, Ethnographical Collection from, 164.  
 Scandinavian Folksong, 180.  
 Schenk, Dr. L., Determination of Sex (*rev.*), 182.  
 Schools, Mental and Physical Deviations

from the Normal among Children in, 185.  
 Sergi, Prof., on Englishmen and Romans, 343.  
 Seton-Karr, H. W., Exhibition of Stone Implements from Somali-land, 52.  
 Sex, Determination of (*rev.*), 182.  
 Shell Axes of Ponape, 296.  
 Shell Mounds of South Africa, 265.  
 Shore, T. W., on Traces of Early Kentish Migrations, 190.  
 Shrubsall, F., A Study of A-Bantu Skulls, 55; Southern Bantus, 55; Eastern or Zulu-Kaffir Group, 56; Central or Bechuana-Basuto Group, 70; Western Group, 71; Western Bantus, 72; Eastern Bantus, 76; Angoni, 77; Manganja, 79; Wahenga, 80; Wa-yao, 80; Warega, 84; Makua from Zanzibar, 85; Mkambo, 85; Northern Basutus, 86.  
 Shrubsall, F., on Ashanti Skulls, 95.  
 Siam, Boat Building in, 192.  
 Silchester, Excavations at, 190.  
 Skulls, Bantu, 55.  
 Small, J. W., elected, 132.  
 Smithsonian Institution, History of (*rev.*), 178.  
 Smyth, H. Warington, on Boat-building in Siam, 192.  
 Smyth, H. Warington, on the Reed organ of the Lao Shans, 192.  
 Sobos, West Africa, 104.  
 South Africa, Stone Implements from, 48, 54, 251, 258.  
 Spencer, Prof. Baldwin, on Totemism as applied to Australian Tribes, 275.  
 Spencer, Prof. B., and F. J. Gillen, Native Tribes of Central Australia (*rev.*), 330.  
 Spinifex and Sand, by Hon. D. W. Carnegie (*rev.*), 332.  
 Stanton Drew, A. L. Lewis on the Circles of, 187.  
 Steppe Period, 319.  
 Stone Circles of Stanton Drew, 187.  
 Stone Implements from a cave in Griqualand-East, 251.  
 Stone Implements from South Africa, 48, 54, 266, 267.

Stone Implements from Swaziland, 48.  
 Stone Implements from Transvaal, 54.  
 Stone Worship, Origin of, 186.  
 Stormberg, Caves in, 258.  
 Swati, Col. Sir T. Holdich on, 192.  
 Swaziland, Stone Implements from, 48.

## T.

Tabor, C. J., elected, 249.  
 Tanna, Natives of, 127; Skin, Hair and Face, 127; Endurance, Odour, Physical Powers and Senses, 128; Attitudes and Movements, 129; Heredity, Crosses, Physiognomy and Psychology, 130.  
 Tarahumari Indians, 197.  
 Tasmania, Survival of Palæolithic Conditions in, 199.  
 Teriamare, Traces of, in Shape of certain Italian Towns, 190.  
 Thane, Prof., 307.  
 Thompson, Rev. Wardlaw, on the Wanigela River, 204.  
 Tom Tit Tot, by E. Clodd (*rev.*), 179.  
 Topinard, Dr. P., on Ethnology of Cornwall, 329.  
 Torres Straits, Anthropological Expedition, 193, 321.  
 Torres Straits, Ethnographical Notes on, 5.  
 Totems of Murray Islanders, 6.  
 Totem House-Posts in Museum at Oxford, 136.  
 Totem-Post at Fox Warren, 133.  
 Totemism, Prof. E. B. Tylor on, 138.  
 Totemism of Australians, 275, 281.  
 Transvaal, Stone Implements from, 54, 271.  
 Treasurer's Report, 308.  
 Tree-Marriage, 242.  
 Tylor, Prof. E. B., on the Totem-Post from the Haida Village of Masset, Queen Charlotte Islands, now at Fox Warren, near Weybridge, 133.  
 Tylor, Prof. E. B., on two British Columbian House-Posts with Totemic

Carvings, in the Pitt-Rivers Museum at Oxford, 136.

Tylor, Prof. E. B., Remarks on Totemism, with especial reference to some modern theories respecting it, 138.  
 Tylor, Prof. E. B., on N.W. Tribes of Canada, 196.  
 Tylor, Prof. E. B., on the Survival of Palæolithic Conditions in Tasmania and Australia, 199.  
 Tylor, Prof. E. B., on Totemism, 279, 280.

## V.

Vaux, Baron Carra de, on Arab Marvels, 337.  
 Vocabularies from Kavirondo, 338.

## W.

Waddell, Major L. A., Among the Himalayas (*rev.*), 335.  
 Walhouse, M. J., Auditor, 287.  
 Wanigela River, R. E. Guise on Tribes inhabiting the Mouth of, 205.  
 Warri District of the Niger Protectorate, R. K. Granville, F. N. Roth, and H. Ling Roth on Natives of, 104; History, 104; Physique, 105; Contact with Civilization, 105; Age, 106; Skin Colour and Odour, 106; Children, 106; Marriage, 107; Burial, 108; Character, 108; Juju, 110; Food, 113; Cultivation, 113; Fishing, 114; Hunting, 114; Habitations, 114; Dress, 116; Skin-marks, 116; Circumcision, 117; Government, 117; Slavery, 117; Succession, 118; Palm Oil, 118; Trade, Manufactures, Weapons and Pottery, 119; Canoes, 120; Diseases, 121; Sanitation, 122; Pathology, 122; Salutations, 122; Games, 123; Expression of Colour, 123; Mensuration, 124; Language, 124.  
 Welcker, Prof., Obituary, 326.  
 Weld, Miss A. G., on a Buddhist Image found in an Irish Bog, 189.

Wello District, Upper, Natives of, 35.  
West African Studies, by Miss Kingsley  
(*rev.*), 333.  
Western Australia, Native Objects from,  
20.  
Wilson, T. H., Scrutineer, 307.  
Woodthorpe, Gen., Obituary, 324.

## Y.

Yap Folklore, 300.  
Yorkshire, Lake-Dwellings in, 150.

## Z.

Zulu Skulls, 57.

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